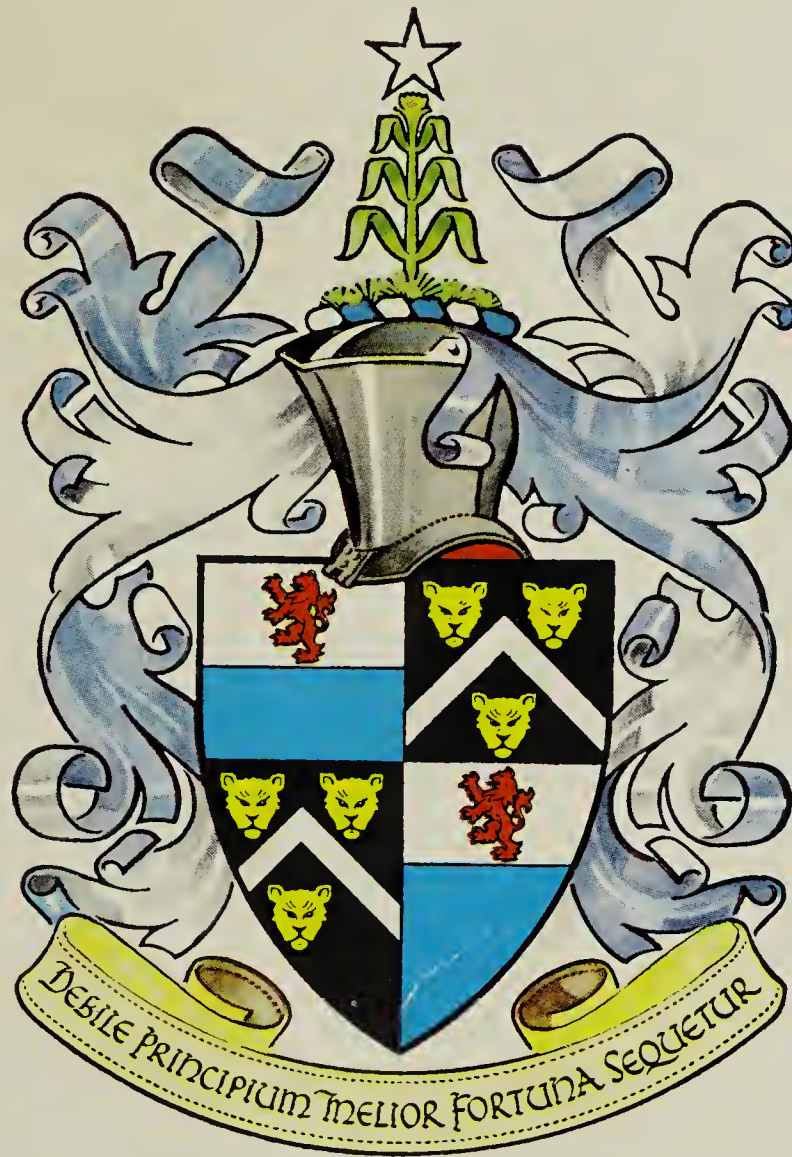


CITY OF DURBAN



Annual Report

OF THE

CITY MEDICAL OFFICER OF HEALTH

YEAR ENDED 31st DECEMBER, 1970.



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*With the
Compliments of the
City Medical Officer of Health*

CITY HEALTH DEPARTMENT
9 OLD FORT PLACE
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DURBAN



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ANNUAL REPORT : 1970

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N.B. In this Report figures shown in parenthesis refer to those of the previous year (1969) unless inconsistent with the context.

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City Health Department,
9 Old Fort Place,
DURBAN.

December, 1971

His Worship the Mayor and
Councillors of the City of Durban.

Mr. Mayor, Ladies and Gentlemen,

It is with pleasure that I present, in terms of Section 13 of the Public Health Act, as amended, the 68th Annual Report on the public health of the City of Durban, together with an account of the work performed by the City Health Department during the year 1970.

The expansion of Durban in the fields of commerce and industry continued apace, whilst the City retained pride of place as the premier holiday resort of the Republic of South Africa.

Generally public health conditions were at a satisfactory level and nothing untoward affected the health of the community. There were no cases of formidable epidemic disease.

The decadal census undertaken in May of this year showed an increase in population of 15 769, bringing the total to 725 577, of which 73,46% were Non-White, the Asiatic community being the largest with a population of 289 765.

The highest birth rate (48,15) was amongst the Bantu and in this group there has been a steady rise over the past ten years. The indications are that the rate will tend to increase for some years to come. The European rate remained more or less stable at 19,39.

The major cause of death in the European, Coloured and Asiatic group, fell into the category of diseases of the heart and circulatory system, whilst the prime cause of death in the Bantu was pneumonia of various kinds, with diseases of the heart and circulatory system second. Neoplasms were the second most common cause of death in the European and the third in the Coloured and Bantu groups. Enteritis and diarrhoea no longer appeared amongst the first three causes of death in the Bantu community, an encouraging indication of this group's improving hygienic circumstances.

The infant mortality rate in all races showed a decrease, the most notable being amongst the Bantu where the rate fell from 103,39 per 1 000 live births to 89,42. Whilst the overall Non-White rates, particularly the Bantu, are high and leave no room for complacency, it is worth recalling that in 1961 the Bantu rate was 167,10. Further reduction in this rate will tend to proceed apace with improved standards of living rather than with increased standards of preventive medicine.

Continual reference to the global epidemiological picture was maintained, especially in regard to cholera as it is considered that Durban could well be the initial city to be affected, being South Africa's first port of call from the Far East and the East African Coast.

The general decline in local infectious diseases was remarkable for the fact that only five cases of diphtheria occurred, a record that is unlikely to recur for some years. Similarly a decline in the cases of poliomyelitis to three took place, which is the second lowest for a considerable number of years. Despite the fact that the Province of Natal remained a proclaimed infected area, no cases of human or animal rabies occurred in the City. Tetanus cases still occurred relatively frequently, especially tetanus neonatorum, which accounted for 11 of the 22 cases. The high mortality rate of 55% indicates the virulence of this disease in no uncertain manner. Once again typhoid fever remained toward the fore amongst the notifiable diseases, a reflection perhaps to some extent on both personal and environmental hygiene. That viral hepatitis cannot be lightly regarded is confirmed by eight deaths amongst the 199 cases.

Of four outbreaks of food poisoning it is of interest to note that one was due to *Cl. welchii*, an organism likely to be overlooked as *salmonellae* and *staphylococci* are so often incriminated.

Once again it is disappointing to have to report that pulmonary tuberculosis remains the major public health problem of a non-environmental nature confronting this City. On the other side of the coin it is remarked that the number of notifications has steadily fallen, despite the increase in population, and the attack rate has dropped in the overall to 2,45 per 1 000 population from 3,78 ten years ago. The Bantu community is the most sorely afflicted by this disease, but here the greatest improvement can also be seen, the notifications numbering 1 099 compared with 1 648 in 1961, the corresponding attack rates being 5,48 and 8,82 respectively. It is considered that the notification in the 0 - 4 year group, of positive tuberculin reactors in the absence of radiological findings is no longer warranted, particularly as there has been a shift to the over 24 year age group in the incidence among the Bantu, and also because the use of B.C.G. vaccine has become widespread. The role

played by socio-economic factors in this disease is such that a continued reduction in the Bantu attack rate is largely dependent upon the current increasingly improved standard of living amongst them being maintained or preferably accelerated. It is of significance that the death rate from this disease continues to diminish rapidly.

That the extensive field programmes in health education and contact tracing is indeed rewarding in combating this scourge is borne out by the discovery rate amongst home contacts with positive radiological findings of up to 10%.

The maternal and child health services of most progressive health departments have followed modern thinking in promotive health and are evolving into a family health service. That this trend will be accelerated in the future is undoubted. The public health nurse, with her extensive professional training, practical knowledge of social backgrounds and welcome entree to nearly every home, is beyond question ideally suited to handle with competence and insight the many problems ranging far beyond the concept of mother/child health to the wider realms of geriatrics, psychiatry, family planning, physical disabilities, rehabilitation, family nutrition and of course, family health education. That this concept will in turn require a far larger health visiting staff amongst all communities is obvious, but the alleviation of preventable distress will more than offset the cost.

Family planning services increased during the year but progress was not as rapid as envisaged. The ultimate achievement of a general zero population growth is as yet an unattainable ideal but none the less it is an ideal towards which we strive, albeit slowly.

The City Council's scheme for the early detection of cervical uterine cancer continued to enjoy widespread favour, whilst its health educative effect on the community must indeed have been, and still is, high. There is no doubt that this service will expand, particularly if it is combined with family planning services, which is a logical development.

The child health services retained their popularity amongst the citizens of Durban, greatly increased attendances being recorded at all clinics except those for the Coloured section of the population. In all, the attendances increased by some 50 000 bringing the total to over half a million.

The State Subsidised Skim Milk Powder Scheme for the prevention of kwashiorkor remained a most valued measure especially amongst the Bantu. The allocation by the State was increased to 240 000 500g packages per annum while the cost of the additional 1c per package

involved in the switch to decimalisation was borne by the City Council. Over the years this scheme has materially contributed to the steady decline in Bantu deaths occurring under 5 years of age from malnutrition.

Home visiting, an invaluable service rendered by the child health staff, increased from some 75 700 in 1969 to 83 600 in 1970, an achievement of no mean proportion by the staff when the increased clinic attendances are borne in mind.

Immunisation against smallpox, diphtheria, whooping cough and tetanus continued at an increased rate, whilst oral immunisation against poliomyelitis was sustained at a high level.

The gap between mass and individual teaching is wide, so with a special health education unit this Department is in a most fortunate position. Broadly, health education at a person-to-person (individual) level is practised by all members of the staff, but especially by the health visitors and health assistants, whilst the health education section staff deal with mass health education through the media of films, group talks, loudspeaker addresses, competitions, conferences and press publicity. How large such a section should be can be determined only by the size of the municipal purse, for the achievements, albeit intangible, must be remarkable if results so obviously demonstrated when the unit spearheads a specific campaign are any indication. What words Solomon whispered to the Queen of Sheba remain a mystery, but in the pursuit of health in the tremendous field of preventive medicine there is no room for mystery and information must be disseminated but always in the form in which it is properly understood, for of all things, Solomon considered understanding the most precious kind of knowledge available to man.

Health inspectional activities embracing all fields of sanitation were kept at a high standard although it is disappointing to record several serious instances of pollution detrimental to marine life, the persistence of illegal vending of foodstuffs and continued existence of the Indian Market with its inherently grossly unhygienic features. That the toilet facilities at the rugby stadium remained unimproved to cater for major fixtures was a poor advertisement for the City. Conversely, it is pleasing to note that at long last the "covered wagon" in the City has disappeared and all meat for sale is now conveyed in enclosed vehicles with the carcasses hanging; the circus site and pantech-nicon sites are operating, and the Victoria Street beer hall has been demolished. The control of food premises and food handling was maintained at the high level demanded by climatic and other local conditions.

Progress in the implementation of the City Council's programme of providing water-borne sewerage to the whole city was continued, the Northern Sewage Works being commissioned during the year. Unfortunately a setback occurred when the Central Sewage Works were damaged in May and all sewage received at this plant was discharged after maceration only, through the submarine pipeline three miles out to sea at a depth of 250 feet. Once again it must be stressed that the provision of a satisfactorily operating reticulated water-borne sewerage system to all parts of the City still remains the major environmental health problem before the City Council and that no effort should be spared to reduce the time period of some 15 years originally set for the completion of this programme.

The Chatsworth stabilisation ponds were closed and sewage diverted to the Southern Works, which not only removed a temporary method of disposal but also an ever present potential mosquito nuisance which, as in the case of other ponds and swamps in the City, was controlled biologically by a species of Tilapia fish.

The demand for housing in all sections of Municipal assisted schemes continued. The imminent completion of an old age home for some 460 Europeans is gratifying. The needs of the Coloured community remained most acute although schemes begun by the Department of Community Development may alleviate the situation. Housing for Indians is still a problem unlikely to be solved in the near future, although negotiations for land to the north of Durban for developing two townships have begun. Bantu housing progressed with schemes being undertaken by the City Council on behalf of the South African Bantu Trust. Slum clearance was pursued but was of course geared to the availability of reasonable alternative accommodation. The ready co-operation of the Department of Community Development is sincerely acknowledged.

A prolonged drought seriously affected milk supplies which in turn called for some relaxation of requirements. This was done by allowing limited quantities of milk, based on average usage, to be introduced from unregistered dairies for the production of sterilized milk only.

A part of the Department's activities, rarely brought to general notice, is the immense amount of in-service training, lectures and demonstrations given to students from the university, the hospitals and the technical colleges.

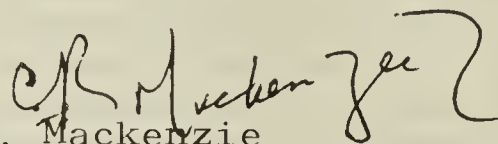
The problem of filling staff vacancies, particularly for professional and technical posts showed no sign of easing, despite a revision of salary grades.

To His Worship the Mayor and City Councillors I must express my thanks for their interest in public health matters, whilst particular thanks are due to the Chairman and members of the Public Health Committee for their unfailing encouragement and active support. I sincerely appreciated the help and co-operation received from the other Heads of Departments and their Staffs. The assistance afforded this Department by the Chairman and Members of the Municipal Service Commission who took office early in the year is acknowledged with pleasure.

I am deeply grateful to members of the Press and the South African Broadcasting Corporation for their ever ready co-operation in bringing to the notice of the citizens of Durban matters of importance or interest in public health, and especially in the responsible manner in which they have done so. That they serve as a most invaluable link between my Department and members of the public is undoubted.

In conclusion it is with a sense of pride that I pay a special tribute to each and every member of the staff of the City Health Department for their loyalty, team spirit and consistently high standard of work all of which have given this Department a high reputation for achievement.

Yours faithfully,



C.R. Mackenzie

M.B.; B.Ch.; D.P.H.; D.T.M. & H.(Rand);
F.R.S.H.; Honorary Senior Lecturer in
Public Health Administration,
University of Natal.

CITY MEDICAL OFFICER OF HEALTH

I. HISTORICAL AND GEOGRAPHICAL

(a) Historical Background

When Durban was promulgated a borough in 1854, only 1 200 persons occupied an area of 3 107,99 hectares (12 square miles); since then the City has progressively enlarged through the incorporation of additional areas. The largest additions were the inclusion of the health board areas of South Coast Junction, Umhlatuzana, Mayville, Sydenham and Greenwood Park in 1932, which increased the area to 18 129,93 hectares (70 square miles) and the population to 215 000. In 1957 and 1961 the addition of the kwaMashu Bantu and Chatsworth Indian townships respectively further expanded the Municipal area to 22 273,92 hectares (86 square miles). In 1962 the Bay Lands and in 1966 Welbedagt were added, bringing the area of the City to 25 121,91 hectares (97 square miles). In the course of 1968 the boundary between Westville and Durban was altered, the main effects being that certain small areas of Westville were incorporated into Durban, and the European group area at the extreme western end of Reservoir Hills was transferred from the City to Westville.

The Public Health Area of Newlands, situated to the north west and under the control of the Local Health Commission, was incorporated into the City for development as an Indian housing scheme in 1969. This area comprised some 1 214,06 hectares (3 000 acres). Thus at the year's end Durban covered 26 456,75 hectares (102,25 square miles).

(b) Geography

The City, being situated on the south eastern seaboard of the African continent at longitude 31° east and latitude $29^{\circ} 52$ minutes south, enjoys a sub-tropical climate throughout the year. This, of course, materially contributes to making Durban the Republic's premier holiday resort.

In addition, Durban is one of the major seaports in the southern hemisphere and handles more than 50% of the total cargo passing through South African ports.

Full details of meteorological data are set out in the accompanying table.

(c) General Layout

Bathing and surfing facilities of a very high standard are provided from the City's beaches, with separate

METEOROLOGICAL DATA

1970	24 Hours Shade Temperature (°C)			Relative Humidity			Barometer Readings (Milli-bars)			Rainfall				Sunlight
	Max.	Min.	Mean	Max.	Min.	Av.	Max.	Min.	Mean	mm	Inches	No. of Days on which rain fell	Highest Fall (mm)	Average Hours of Sunshine per day
January	31, 9	16, 4	23, 4	95	36	79	217	003	136	91, 6	3, 62	17	60, 3	6, 82
February	30, 7	16, 1	24, 0	96	41	78	277	035	149	33, 4	1, 30	8	19, 8	8, 00
March	31, 0	15, 6	23, 7	95	36	75	259	044	155	23, 5	0, 91	8	7, 7	8, 24
April	32, 2	11, 2	21, 2	95	31	76	278	032	183	66, 4	2, 60	13	17, 6	7, 23
May	27, 5	8, 8	18, 9	94	26	78	311	017	168	90, 4	3, 54	6	56, 2	6, 61
June	27, 8	5, 9	16, 3	94	24	73	328	027	219	72, 3	2, 83	6	58, 6	7, 25
July	33, 1	6, 1	16, 1	76	20	70	389	063	208	24, 2	0, 95	3	14, 5	7, 58
August	25, 9	8, 1	17, 4	95	32	77	301	090	190	99, 9	3, 93	6	74, 8	7, 21
September	22, 6	10, 9	19, 3	93	32	75	233	027	158	77, 0	3, 03	11	42, 3	5, 29
October	36, 4	8, 3	19, 6	94	16	78	335	077	180	111, 7	4, 41	15	64, 4	4, 95
November	29, 3	14, 5	21, 3	95	53	80	252	003	130	105, 2	4, 14	18	13, 6	4, 23
December	32, 4	13, 9	23, 4	94	53	80	206	008	105	102, 2	4, 02	19	23, 5	5, 56
Total for the year:										897, 6	35, 28	130	-	6, 58 Daily average for year

areas set aside for the various racial groups. Suitably sited throughout Durban are to be found fresh water swimming baths, playing fields and parks.

The main commercial centre is situated about a mile from the foreshore, whilst most of the major industries are located to the south. The principal residential areas extend along the coast line and the Berea.

(d) Municipal Data

Area: 26 456,75 hectares (102,25 square miles)

Valuation:

	<u>Land</u>	<u>Buildings</u>
Old Borough and added Areas (excluding Welbedagt, kwaMashu and Newlands)	R752.956.690 (R241.260.300)	R664.514.280 (R501.021.120)
Welbedagt	R462.830 (R382.760)	R131.100 (R108.810)
Newlands	R3.105.770 (R822.080)	R769.830 (R733.910)

Rates: (Including Water Rate)
(Cents per Rand)

	<u>Land</u>	<u>Buildings</u>
(a) Code 1 (Residential property, dwellings, maisonettes, etc.)	1,52 cents (2,70)	1,52 cents (2,70)
(b) Code 2 (Residential property, flats, boarding houses and private hotels)	1,52 cents (2,63)	1,52 cents (2,63)
(c) Code 3 (Other than residential property)	3,00 cents (7,44)	0,05 cents (1,24)

The rates on land and buildings in the Newlands area are currently assessed at 40% of the general rate plus a water rate.

There are no rateable valuations for the kwaMashu Bantu housing area, as in terms of Ordinance 5 of 1958, the Council cannot levy rates on properties in this area without the consent of the Administrator of Natal.

II. VITAL STATISTICS

Population (May 1970 Census)

European	192 569	(26,54%)
Coloured	42 598	(5,87%)
Bantu	200 645	(27,65%)
Asiatic	289 765	(39,94%)
	<hr/>	
	725 577	(100,00%)

The racial composition of the total population shows some changes when compared with the 1960 census. The percentages then were 28,09 for Europeans, 4,27 for Coloureds, 31,31 for Bantu and 36,33 for Asiatics.

The establishment of the Umlazi Township for the Bantu community just beyond the southern boundary of the City, may well account for the decrease in the percentage of Bantu, whilst an apparent influx of Coloureds into Durban is thought to be responsible for most of the increase in this group.

1970 Births

Race	Male	Female	Total	1969
<u>Legitimate:</u>				
European	1 870	1 694	3 564	3 350
Coloured	598	617	1 215	1 163
Bantu	2 830	2 743	5 573	5 399
Asiatic	4 552	4 278	8 830	8 258
Total	9 850	9 332	19 182	18 170
<u>Illegitimate</u>				
European	77	92	169	202
Coloured	220	222	442	452
Bantu	1 990	2 099	4 089	3 724
Asiatic	111	113	224	269
Total	2 398	2 526	4 924	4 647
<u>Total Births</u>				
European	1 947	1 786	3 733	3 552
Coloured	818	839	1 657	1 615
Bantu	4 820	4 842	9 662	9 123
Asiatic	4 663	4 391	9 054	8 527
Total	12 248	11 858	24 106	22 817

Crude Birth Rates: (Number of births per 1 000 population)

	<u>1970</u>	<u>1969</u>	<u>1960</u>
European	19,39	18,61	19,75
Coloured	38,90	49,86	40,56
Bantu	48,15	43,57	33,42
Asiatic	31,25	30,79	29,31
All races	33,22	32,15	28,39

The total birth rate, when compared with the 1960 census, reflects an increase of 4,8 per 1 000 population, the major increase being amongst the Bantu group and to a lesser extent amongst the Asiatic group. The rate for Europeans reflects little change, whilst there is a decrease of 1,6 per 1 000 population amongst the Coloured group.

The figures for 1970 compared with 1969, reflect major changes in the Coloured and Bantu groups. This is due to the adjustment to the estimated population figures as a result of the 1970 census.

Illegitimate Births: (As a percentage of total births)

	<u>1970</u>	<u>1969</u>	<u>1960</u>
European	4,53	5,69	2,17
Coloured	26,67	27,99	24,44
Bantu	42,32	40,82	62,50
Asiatic	2,47	3,15	1,57
All races	20,43	20,37	25,31

It is noted that whilst there is an increase of illegitimate births amongst the European, Coloured and Asiatic communities, there is a marked decrease amongst the Bantu over the last decade.

Stillbirths: (Rate per 1 000 live births)

	Number			Rate		
	1970	1969	1960	1970	1969	1960
European	33	37	43	8,92	10,53	13,53
Coloured	32	24	16	19,69	15,02	16,16
Bantu	302	292	209	32,26	33,07	35,64
Asiatic	148	143	124	16,62	17,06	20,48
All races	515	496	392	21,83	22,22	24,43

With the exception of the Coloured community, where the rate per 1 000 live births has shown an increase, the pattern has not varied to any major degree over the past decade, and a steady decrease is noted in the other three races.

Deaths:

Race	Total Deaths				Crude death rate per 1 000 population		
	Male	Female	Total	1969	1970	1969	1960
European	1 102	902	2 004	1 872	10,41	9,81	9,39
Coloured	137	106	243	287	6,74	8,87	9,11
Bantu	1 363	992	2 355	2 489	11,74	11,87	18,20
Asiatic	1 147	872	2 019	2 078	6,97	7,50	7,39
All races	3 749	2 872	6 621	6 726	9,13	9,48	11,41

The Bantu death rate, no doubt largely due to improved environmental conditions, preventive health and medical services, has declined from 18 to 11 deaths per thousand of population over the past decade. Conversely, the Bantu birth rate, over the same period, has risen from 33 to 48 per thousand of population. Taken in conjunction with the reduction in the infant mortality rate over the last 10 years the population structure of the Bantu has significantly changed.

The three main causes of death for the different racial communities were as follows:

Cause of Death	Number	Percentage of Total Deaths
<u>European</u>		
(a) Heart and circulatory system	768 (709)	38,32 (37,87)
(b) Neoplasms	298 (306)	14,87 (16,35)
(c) Vascular lesions affecting central nervous system	204 (198)	10,18 (10,58)
<u>Coloured</u>		
(a) Heart and circulatory system	33 (34)	13,58 (11,85)
(b) Pneumonias	26 (37)	10,70 (12,89)
(c) Neoplasms	24 (28)	9,88 (9,76)
<u>Bantu</u>		
(a) Pneumonias	195 (192)	8,28 (7,71)
(b) Heart and circulatory system	139 (157)	5,90 (6,31)
(c) Neoplasms	121 (104)	5,14 (4,18)
<u>Asiatic</u>		
(a) Heart and circulatory system	486 (456)	24,07 (21,94)
(b) Pneumonias	235 (286)	11,64 (13,76)
(c) Vascular lesions affecting central nervous system	190 (210)	9,41 (10,11)
<u>All Races</u>		
(a) Heart and circulatory system	1 426 (1 356)	21,54 (20,16)
(b) Pneumonias	643 (669)	9,71 (9,95)
(c) Neoplasms	539 (534)	8,14 (7,94)

Age at Death

The number of deaths at various ages, with the percentage of total deaths, is summarised in the following table:

1970

AGE GROUPS																	
0 - 1		1 - 4		5 - 13		14 - 23		24 - 43		44 - 63		64 and Over		Total			
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
DEATHS																	
European		35	16	-	5	3	6	9	10	35	34	377	199	643	632	1 102	902
Coloured		33	24	6	5	4	1	2	4	21	11	43	29	28	32	137	101
Bantu		422	415	129	121	33	12	69	43	308	131	315	172	87	98	1 313	992
Asiatic		190	162	47	53	31	18	27	30	168	122	375	255	309	232	1 117	872
Total Non-European		645	601	182	179	68	31	98	77	497	264	733	456	424	362	2 647	1 970
Total of All Races		680	617	182	184	71	37	107	87	532	298	1 110	655	1 067	994	3 749	2 872
PERCENTAGES																	
European		3,2	1,7	-	0,5	0,3	0,7	0,8	1,1	3,2	3,8	34,2	22,1	58,3	70,1	100	100
Coloured		24,1	22,6	4,4	4,7	2,9	0,9	1,5	3,8	15,3	10,4	31,4	27,4	20,4	30,2	100	100
Bantu		30,9	41,8	9,5	12,2	2,4	1,2	5,1	4,3	22,6	13,2	23,1	17,4	6,4	9,9	100	100
Asiatic		16,6	18,6	4,1	6,1	2,7	2,1	2,4	3,4	14,6	14,0	32,7	29,2	26,9	26,6	100	100
Total Non-European		24,4	30,5	6,9	9,1	2,6	1,6	3,7	3,9	18,7	13,4	27,7	23,1	16,0	18,4	100	100
Total All Races		18,1	21,5	4,8	6,4	1,9	1,3	2,9	3,0	14,2	10,4	29,6	22,8	28,5	34,6	100	100

Amongst the Non-Europeans 27,0 per cent (Coloureds 23,5; Bantu 35,5; Asiatics 17,4) of all deaths occurred under the age of one year as compared with 2,54 per cent in the European group.

Deaths under five years of age constituted 2,8 per cent of all deaths in Europeans compared with 34,8 per cent in Non-Europeans (Coloured 28,0; Bantu 46,2; Asiatic 22,4).

Deaths under 24 years of age constituted 4,1 per cent of all deaths in Europeans compared with 4,4 per cent in the previous year, while amongst Non-Europeans 40,7 per cent of all deaths occurred under 24 years of age, a decrease from the 44,6 per cent recorded in the previous year.

It is noted that amongst the Coloured group deaths from the heart and circulatory system have replaced pneumonias as the main cause of death, while amongst the Bantu group neoplasms are the third main cause of death instead of enteritis and diarrhoea.

Deaths from Motor Accidents

	<u>1970</u>	
European	28	(27)
Coloured	6	(1)
Bantu	71	(16)
Asiatic	55	(96)
All races	160	(140)

Suicides

	<u>1970</u>	
European	10	(11)
Coloured	3	(2)
Bantu	6	(8)
Asiatic	33	(28)
All races	52	(49)

Infant Mortality (deaths under the age of one year and rate per 1 000 live births)

Race	No. of Deaths	Rate
European	51 (50)	13,78 (14,22)
Coloured	57 (71)	35,08 (44,63)
Bantu	837 (913)	89,42 (103,39)
Asiatic	352 (365)	39,52 (43,54)
All races	1 297 (1 399)	54,98 (62,68)

Although the Bantu rate is still very high in comparison with that of the other race groups, it is nevertheless pleasing to record that for the first time the figure is below 100 representing a substantial improvement over previous years, viz. 388 in 1955, 246 in 1960 and 117 in 1965.

Maternal Deaths (deaths from causes related to child-birth and rate per 1 000 live births)

Race	No. of Deaths	Rate
European	1 (1)	0,27 (0,28)
Coloured	1 (-)	0,62 (-)
Bantu	10 (10)	1,07 (1,13)
Asiatic	10 (8)	1,12 (0,95)
All races	22 (19)	0,93 (0,85)

A satisfactory level is being maintained in this sphere of mortality.

III. COMMUNICABLE DISEASES

INTRODUCTION

No local cases of formidable epidemic disease were notified during the year. Visits were nevertheless made to investigate reports of suspect cases of smallpox, all of which proved to be negative.

GLOBAL EPIDEMIOLOGY

This Department makes continual reference to the World Health Organisation weekly epidemiological bulletin from which much of the undermentioned information has been obtained. With rapid transport and an ever increasing travelling population it becomes essential to keep abreast of the prevalence of diseases in neighbouring states, and to watch and to analyse the disease trends throughout the world. In respect of local trends, it is hoped that the epidemiological statistics for the Republic of South Africa which were discontinued in March 1970 will again become available, as this is an invaluable guide for comparing disease incidences within this country.

(i) Smallpox

The world-wide picture at the end of 1970 is one of a decreasing incidence of the disease with approximately 30 000 cases being notified as compared with 130 000 in 1967.

In South Africa only 118 cases were reported as against 246 during 1969. Swaziland had a case rate of just over 5 per 100 000 population during 1969 as against the rest of South Africa's rate of 0,5 to 4,9 per 100 000, but during 1970 Swaziland's rate also decreased to the 0,5 - 4,9 per 100 000 range.

(ii) Cholera

In my report for 1965 I indicated that cholera, although still confined to the East, had passed new boundaries in its progression westwards. In my 1967 report I mentioned the importance of the closing of the Suez Canal in relation to the introduction of formidable epidemic diseases, including cholera. During 1970 this disease established new footholds in West and East Africa, and the possibility of its eventual introduction into this country becomes more real with each passing year.

(iii) Diphtheria

While the incidence of diphtheria in Durban dropped drastically during 1970, it is of interest that in the United States of America the figure for the same period

increased to the extent that it reached the highest total since 1962.

Concern has often been expressed in South Africa about the numbers of immunised children who develop the disease and the efficacy of the vaccine. But in a recent outbreak of the disease in Arizona, United States of America, of 10 patients out of 12 whose immunisation state was known, four (including one who died) had been adequately immunised against the disease. None the less, the degree of protection in the under 10 year age group is quoted in the United States of America as being 70 times greater in those receiving three or more injections of vaccine, than in the unimmunised.

(iv) Yellow Fever

In Africa yellow fever occurs chiefly in West Africa. While many outbreaks occurred in 1969, the picture improved vastly in 1970 and only a few sporadic cases were reported (21 cases as against 322 in 1969). Whether this apparently satisfactory state of affairs will remain, is open to some doubt.

A. NOTIFIABLE DISEASES

Notifications

In comparison with 1969, there has been a general decline in notifications and corresponding incidence rates of almost all diseases. In particular, there was a marked reduction in the number of diphtheria and poliomyelitis cases. The only increases in notifications were in respect of gonococcal ophthalmia and viral hepatitis.

The table on the following page reflects, in race groups, the number of cases of diseases notified, and the overall attack rate.

Disease	E	C	B	A	Total	Attack Rate Per 1 000 Population
Diphtheria	-	1	3	1	5	0,0068
Encephalitis	4	1	3	7	15	0,0206
Erysipelas	1	-	-	-	1	0,0014
Gonococcal Ophthalmia	-	-	16	1	17	0,0234
Leprosy	-	-	2	-	2	0,0027
Meningococcal Meningitis	4	-	12	11	27	0,0372
Ophthalmia Neonatorum	-	-	-	1	1	0,0014
Poliomyelitis	-	-	2	1	3	0,0041
Puerperal Sepsis	-	-	11	3	14	0,0192
Scarlet Fever	32	2	-	-	34	0,0468
Tetanus	-	-	12	10	22	0,0303
Typhoid Fever	2	-	30	5	37	0,0509
Viral Hepatitis	54	4	35	106	199	0,2742

Diphtheria

The adjoining table sets out the notifications, deaths and appropriate rates for Durban since 1950. Only five cases were notified in 1970, compared with the previous lowest total of 19 recorded in 1965, and is by far the lowest total recorded. Although this is gratifying, there was no significant change in the immunisation state of the population to which this reduction could be attributed.

Of the five cases notified, one was a Coloured, three were Bantu and the other an Asiatic. Two deaths were recorded, an Asiatic and a Bantu, neither of whom had been immunised against the disease. All five notifications were clinical cases and no carriers were found. The immunisation state of these cases is depicted hereunder:

Details	5 Clinical Cases
3 doses of vaccine	1
No previous vaccine	4

Three of the cases were under five years of age, one was aged five years and the other 13 years.

DIPHTHERIA : NOTIFICATIONS AND DEATHS : 1950 to 1970																				
(Notification Rate per 1 000 Population : Mortality Rate percentage of Total Notifications)																				
Year	EUROPEAN				COLOURED				BANTU				ASIATIC				ALL RACES			
	Notifications		Deaths		Notifications		Deaths		Notifications		Deaths		Notifications		Deaths		Notifications		Deaths	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
1950	145	1,10	1	0,69	34	2,65	2	5,88	124	0,97	18	14,52	58	0,45	7	12,07	361	0,90	28	7,75
1	58	0,45	2	3,45	14	0,94	2	14,29	150	1,12	24	16,00	47	0,32	11	28,40	269	0,63	39	14,50
2	50	0,38	4	8,00	7	0,45	-	-	103	0,73	19	18,45	51	0,34	11	21,57	211	0,18	34	16,11
3	39	0,28	2	5,13	26	1,51	5	19,23	76	0,51	19	25,00	49	0,32	11	22,45	190	0,41	37	19,47
4	25	0,17	1	4,00	8	0,44	-	-	48	0,30	6	12,50	19	0,12	-	-	100	0,21	7	7,00
5	75	0,50	1	1,33	34	1,82	2	5,88	102	0,61	16	15,69	69	0,42	15	21,74	280	0,56	34	12,14
6	70	0,46	5	7,14	13	0,67	1	7,69	43	0,24	17	39,53	69	0,42	12	17,39	195	0,37	35	17,95
7	38	0,25	4	10,53	5	0,21	-	-	37	0,21	11	29,73	31	0,16	3	9,68	111	0,20	18	16,21
8	38	0,25	3	7,89	6	0,24	-	-	57	0,31	13	22,81	70	0,34	15	21,43	171	0,30	31	18,13
9	24	0,15	-	-	12	0,46	1	8,33	55	0,29	4	7,27	24	0,11	5	20,83	115	0,19	10	8,69
1960	9	0,06	1	11,11	7	0,28	-	-	56	0,31	6	10,71	22	0,10	4	18,17	94	0,16	11	11,70
1	8	0,05	-	-	4	0,16	-	-	63	0,34	11	17,46	28	0,12	3	10,71	103	0,17	14	13,59
2	10	0,06	1	10,00	5	0,19	-	-	46	0,24	7	15,22	9	0,04	2	22,22	70	0,11	10	14,29
3	3	0,02	-	-	6	0,22	1	16,67	17	0,09	1	5,88	12	0,05	3	25,00	38	0,06	5	13,16
4	5	0,03	-	-	2	0,07	-	-	15	0,08	2	13,33	11	0,05	5	45,45	33	0,05	7	21,21
5	1	0,006	-	-	2	0,07	-	-	13	0,07	2	15,38	3	0,01	-	-	19	0,03	2	10,53
6	2	0,01	-	-	1	0,03	1	100,00	16	0,08	3	18,75	21	0,08	6	28,57	40	0,06	10	25,00
7	1	0,005	-	-	2	0,07	-	-	18	0,09	5	27,78	8	0,03	2	25,00	29	0,04	7	24,14
8	1	0,005	-	-	6	0,19	-	-	9	0,04	1	11,11	14	0,05	3	21,43	30	0,04	4	13,33
9	-	-	-	-	1	0,03	-	-	14	0,07	4	28,57	14	0,05	3	21,43	29	0,04	7	24,14
1970	-	-	-	-	1	0,02	-	-	3	0,01	1	33,33	1	0,003	1	100,00	5	0,006	2	40,00

Encephalitis

There were 15 notifications of this disease during the year, five less than in the previous year. The following table sets out the aetiology of these cases and also indicates the racial incidence. Deaths are recorded in parenthesis.

Aetiology	E	C	B	A	Total
Virus Encephalitis	3 (2)	1 (1)	2 (-)	4 (2)	10 (5)
Measles "	-	-	1 (-)	1 (-)	2 (-)
Mumps "	1 (-)	-	-	2 (-)	3 (-)
Total	4 (2)	1 (1)	3 (-)	7 (2)	15 (5)

Five deaths were recorded and these were all due to virus encephalitis. The ages of the European deaths were 44 and 42 years, the Coloured death, one year ten months, and both the Asiatic deaths, four years.

Erysipelas

The single notification received was in respect of a European male aged 95 years. This case is also referred to in my preceding annual report having twice contracted the disease during 1969.

Gonococcal Ophthalmia

The 17 notifications, 16 Bantu and one Asiatic, were all infants under the age of four weeks and were notified by the Special Clinic at King Edward VIII Hospital. This figure is seven more than during 1969.

Leprosy

Two cases, both Bantu, were notified, which is seven less than the previous year. The cases were aged 31 years and 39 years, the former a female and the latter a male. One of the cases spent his annual holidays at his home near Estcourt and stated that an aunt of his had died of leprosy in the Leper Institution in Amatikulu.

Malaria

Four cases of malaria were notified during the year, all of whom were infected outside the borders of the Republic. In all instances plasmodium falciparum was responsible for the infection. There were no deaths.

Meningococcal Meningitis

The 27 notifications for 1970 are eight less than the number notified during the previous year. Four deaths were recorded, comprising two Europeans and two Asiatics.

The following table sets out the notifications since 1955 with deaths in parenthesis:

Year	E		C		B		A		Total
1955	7	(-)	-	(-)	4	(-)	3	(-)	14 (-)
1956	5	(-)	3	(-)	22	(-)	3	(-)	33 (-)
1957	5	(-)	1	(-)	6	(-)	6	(-)	18 (-)
1958	6	(-)	2	(-)	11	(-)	4	(-)	23 (-)
1959	4	(-)	2	(-)	-	(-)	2	(-)	8 (-)
1960	2	(-)	2	(-)	2	(-)	-	(-)	6 (-)
1961	1	(-)	-	(-)	4	(-)	1	(1)	6 (1)
1962	2	(-)	-	(-)	3	(-)	-	(-)	5 (-)
1963	2	(-)	-	(-)	1	(1)	1	(-)	4 (1)
1964	5	(-)	1	(-)	3	(1)	2	(2)	11 (3)
1965	7	(1)	2	(1)	16	(2)	5	(-)	30 (4)
1966	8	(-)	3	(1)	11	(1)	5	(2)	27 (4)
1967	6	(2)	4	(1)	20	(3)	4	(-)	34 (6)
1968	5	(1)	3	(2)	15	(3)	4	(1)	27 (7)
1969	4	(1)	4	(1)	17	(1)	10	(1)	35 (4)
1970	4	(2)	-	(-)	12	(-)	11	(2)	27 (4)

Ophthalmia Neonatorum

The single notification was in respect of an Asiatic baby aged 13 days and was notified from King Edward VIII Hospital.

Poliomyelitis

The three notifications during the year comprised two Bantu and one Asiatic case. This number represents a marked decrease from the 22 notifications received last year. The cases were aged two years, 10 months, and 3 months, the first two having been fully immunised while the third had received only one dose of poliomyelitis vaccine.

Virus studies were performed on two of the cases. Type 3 poliovirus was isolated from the stool of one case, and Type 1 poliovirus and Coxsackie Group A virus from the stool of the other. The former had received only one dose of oral poliomyelitis vaccine.

The following table sets out the notifications on a racial basis since 1955:

Year	E	C	B	A	Total
1955	66	5	7	3	81
1956	82	18	32	26	158
1957	113	7	27	16	163
1958	13	1	7	6	27
1959	23	-	21	7	51
1960	9	1	29	8	47
1961	3	3	21	2	29
1962	-	-	4	-	4
1963	1	-	20	5	26
1964	-	-	7	1	8
1965	-	-	9	-	9
1966	1	-	12	6	19
1967	0	0	0	0	0
1968	-	3	10	-	13
1969	1	2	17	2	22
1970	-	-	2	1	3

Puerperal Sepsis

The 14 notifications received are six less than in 1969 and consisted of 11 Bantu and three Asiatics. Nine of these cases gave birth to their babies in local hospitals.

Scarlet Fever

There were 34 notifications of this disease during the year, a decrease of 30 compared with the 1969 figures. Thirty two of the cases were Europeans and two were Coloureds.

Ten cases were admitted to hospital whilst the remainder were nursed at home, where conditions were satisfactory for isolation and treatment.

Rabies

This disease amongst livestock and domestic pets continues to receive the attention of the Division of Veterinary Services. The Province of Natal remains a proclaimed infected area and restrictions on the movements of domestic carnivores and the compulsory inoculation of dogs are still in force. During the year the Division of

Veterinary Services inoculated 1 798 dogs in Durban against rabies. An unknown, but probably far greater number of dogs were inoculated by private veterinary practitioners. No rabies was diagnosed within the Borough. A positive diagnosis, however, was made by Onderstepoort Veterinary Research Laboratories on examination of the brain of a cat which had scratched two persons at Umhlanga Rocks, just outside Durban.

Tetanus

The following table sets out the ages and racial incidence of the 22 tetanus notifications which occurred during the year. Eleven of the cases were in respect of tetanus neonatorum. Twelve deaths were recorded and these are included in parenthesis in the table. The high mortality (55%) is again emphasised.

Ages	E	C	B	A	Total
0 - 31 days	-	-	8 (6)	3 (2)	11 (8)
1 month - 5 months	-	-	-	-	-
6 months - 11 months	-	-	-	-	-
1 year - 4 years	-	-	-	-	-
5 years - 9 years	-	-	-	3 (1)	3 (1)
10 years - 19 years	-	-	1 (1)	2	3 (1)
20 years - 29 years	-	-	1	-	1
30 years - 39 years	-	-	2 (1)	1 (1)	3 (2)
40 years and over	-	-	-	1	1
Total	-	-	12 (8)	10 (4)	22 (12)

The table below sets out the notifications of tetanus since the disease became notifiable in December, 1964. Deaths are recorded in parenthesis:

Year	E	C	B	A	Total
1965	-	4 (2)	15 (5)	9 (1)	28 (8)
1966	-	- (-)	22 (14)	9 (4)	31 (18)
1967	-	- (-)	24 (12)	3 (2)	27 (14)
1968	-	- (-)	9 (4)	8 (6)	17 (10)
1969	-	1 (1)	17 (5)	10 (5)	28 (11)
1970	-	- (-)	12 (8)	10 (4)	22 (12)

Typhoid Fever

Thirty seven cases of typhoid fever were notified during the year, made up of two Europeans, 30 Bantu and five Asiatics. This is seven less than in 1969. There were three deaths, all Bantu.

Two of the Asiatic cases were employed as medical technologists and in the course of their duties handled blood, stool and urine specimens. A further Asiatic case was employed as a clerk in the same laboratory and in the course of his duties handled the same type of specimens. It was considered that this was the source of infection in these three cases. Once again attention is drawn to this occupational hazard of laboratory workers, the high degree of infectivity of *S. typhi* organisms, and the absolute necessity for strict supervision and scrupulous attention to hygiene in the laboratory.

Three Bantu living in the compound of a local brick and tile company were notified within a period of 10 days. Extensive investigations were put in hand but no carriers were discovered. It is believed that the first case probably infected the other two.

Three urinary carriers were discovered during the course of the year and after hospital treatment have remained negative excretors to date.

There was no particular seasonal incidence of the disease, although the highest number of cases in one month, namely nine, was recorded in March.

The following table shows the age groups involved:

Years	0-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50+	Total
Cases	3	3	4	8	4	5	5	3	2	37

Twelve cases of typhoid fever occurred in kwaMashu, four in Lamontville, three in Chesterville, two in Chatsworth, one in the Merebank area and four cases in the compound of a local brick and tile company.

The adjoining table sets out the notifications, deaths and appropriate rates for Durban since 1950. Since 1966 these statistics refer only to cases where *S. typhi* was the causative organism.

TYPHOID : NOTIFICATIONS AND DEATHS : 1950 to 1970																				
(Notification Rate per 1 000 Population : Mortality Rate percentage of total Notifications)																				
Year	EUROPEAN				COLOURED				BANTU				ASIATIC				ALL RACES			
	Notifications		Deaths		Notifications		Deaths		Notifications		Deaths		Notifications		Deaths		Notifications		Deaths	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
1950	16	0,12	-	-	2	0,16	36	0,28	15	41,67	40	0,31	94	0,24	18	19,15				
1	7	0,05	-	-	1	0,07	66	0,49	24	36,36	24	0,17	98	0,23	30	30,61				
2	9	0,07	-	-	1	0,06	54	0,38	10	18,52	37	0,25	101	0,23	12	11,88				
3	4	0,03	-	-	-	-	53	0,36	11	20,75	16	0,10	73	0,16	11	15,07				
4	5	0,04	-	-	4	0,22	74	0,48	9	12,16	9	0,06	92	0,19	11	11,96				
5	8	0,05	-	-	3	0,16	73	0,44	4	5,48	16	0,10	100	0,20	4	4,00				
6	5	0,03	-	-	1	0,05	52	0,30	3	5,77	9	0,05	67	0,13	3	4,48				
7	6	0,04	-	-	1	0,04	110	0,61	6	5,45	5	0,03	122	0,22	8	6,56				
8	7	0,04	-	-	5	0,19	246	1,32	22	8,13	20	0,09	278	0,49	24	8,63				
9	6	0,04	-	-	1	0,04	280	1,45	21	7,50	16	0,07	303	0,51	24	7,92				
1960	8	0,05	1	12,50	4	0,16	71	0,39	3	4,22	7	0,03	90	0,16	4	4,44				
1	2	0,01	-	-	2	0,08	39	0,21	2	5,13	16	0,07	59	0,10	3	5,08				
2	5	0,03	-	-	-	-	25	0,13	-	-	11	0,05	41	0,07	-	-				
3	1	0,01	-	-	3	0,11	25	0,13	1	4,00	6	0,03	35	0,06	1	2,86				
4	2	0,01	-	-	1	0,04	30	0,15	3	10,00	10	0,04	43	0,07	3	6,98				
5	5	0,03	-	-	1	0,03	23	0,12	-	-	10	0,04	39	0,06	-	-				
6	-	-	-	-	3	0,10	37	0,18	3	8,11	12	0,05	52	0,08	3	5,77				
7	2	0,01	-	-	2	0,07	23	0,11	1	4,35	10	0,04	37	0,05	1	2,70				
8	4	0,02	-	-	-	-	20	0,10	3	15,00	19	0,07	43	0,06	3	6,98				
9	6	0,03	-	-	5	0,15	24	0,11	8	33,33	9	0,03	44	0,06	8	18,18				
1970	2	0,01	-	-	-	-	30	0,15	3	10,00	5	0,02	37	0,05	3	8,11				

Viral Hepatitis

Notifications totalling 199 were received, of which 54 were Europeans, four were Coloureds, 35 were Bantu and 106 were Asiatics. This is an increase of 58 over the 1969 figure. Eight deaths were recorded, made up of five Bantu and three Asiatics.

One hundred and fourteen notifications were in respect of hospitalised cases, almost all the Asiatic and Bantu notifications stemming from this source.

Ten of the cases had received blood transfusions prior to the onset of the illness and from the case histories a diagnosis of haemologous serum jaundice cannot be rejected. Two of the deaths were in respect of such cases.

B. OTHER INFECTIOUS DISEASES

The only statistics available to reveal the prevalence of non-notifiable diseases are obtained from two sources:

- (i) admissions of cases to hospital for isolation and treatment; and
- (ii) monthly returns from school principals.

Table I : Admissions of Cases to Hospitals

Disease	E	C	B	A	Total
Chickenpox	7	-	14	1	22
Measles	34	29	257	22	342
Mumps	7	-	8	2	17
Rubella	1	-	-	-	1
Whooping Cough	2	-	21	5	28

The pattern of admissions reflected above is very similar to the previous year.

Table II : School Notifications (European, Coloured and Asiatic only)

1970	Chicken-pox	Measles	Mumps	Rubella	Whooping-cough
January	4	32	46	1	10
February	13	77	90	9	12
March	4	71	141	5	10
April	11	83	157	3	10
May	5	129	120	1	10
June	42	160	172	18	8
July	30	124	85	37	9
August	14	300	177	141	24
September	53	349	186	172	25
October	33	533	153	165	18
November	33	253	156	169	14
December	2	55	8	16	3
Total	244	2 166	1 491	737	153

These figures indicate trends only and do not reflect the total number of cases occurring in the City. Thus it can be concluded that while there were fewer chickenpox and mumps cases, there were increases in whooping cough, measles and particularly rubella notifications, during 1970.

C. MEDICAL EXAMINATION OF BANTU WORK-SEEKERS

Male Bantu seeking employment in the City are medically examined before registration at the Municipal Bantu Administration Department. During 1970 the following examinations were performed:

Adults	55 803
Juveniles	11 125
	<hr/>
	66 928
	<hr/>

This figure is much the same as for last year (66 687).

All male Bantu were routinely vaccinated on the occasion of their medical examination and during the year 65 741 vaccinations were performed. In addition, 4 627 Bantu were referred to the Special Clinic suspected of suffering from venereal disease.

All work seekers from rural areas and domestic servants changing their employment are routinely X-Rayed for evidence of pulmonary tuberculosis at the Chest Clinic on behalf of the Bantu Administration Department. During the year the following figures were recorded:-

	Male	Female	Total
Total Bantu X-Rayed	9 911	12 938	22 849
Cases of active pulmonary tuberculosis discovered	71	108	179
As percentage of total Bantu X-Rayed	0,71%	0,83%	0,78%
Cases of presumably inactive pulmonary tuberculosis discovered	30	72	102
As percentage of total Bantu X-Rayed	0,30%	0,55%	0,45%

D. FOOD POISONING

Within the City of Durban, food poisoning is a notifiable condition when two or more persons are involved after the consumption of food at hotels, boarding houses, and similar institutions. It is possible that odd outbreaks of gastro-enteritis which could be due to food poisoning in hotels, especially during the holiday seasons, are not being reported to this Department. On the other hand, cases of food poisoning involving private dwellings are occasionally reported, which although not notifiable, are nevertheless investigated to ensure that wholesome and uncontaminated food is being supplied to the public.

During 1970, four outbreaks of food poisoning were notified to this Department. In only two of these instances was the causative organism isolated, namely staphylococcus and clostridium welchii. These episodes are described briefly below.

1. In January, an outbreak of food poisoning occurred at an engagement celebration held at Merebank. Of the 200 Indians present, a large number developed symptoms two to three hours after partaking of sandwiches. The symptoms were mainly vomiting and abdominal pain, and in

some instances diarrhoea also. Bacteriological examination of the sandwiches revealed extremely high counts of coagulase positive staphylococci, (11 million per gram).

2. In March a group of 18 persons spent a weekend at a picnic spot some miles from the city. On the Sunday afternoon they consumed food which had been cooked the previous morning and had been kept in the boot of a motor car. Approximately 10 hours later the first persons became ill with symptoms of diarrhoea, vomiting and fever, some of whom were more severely affected than others. It was not possible in this instance to obtain any food, vomit, or stool specimens for bacteriological analysis.

3. During July, an outbreak of food poisoning occurred among nursing staff at a local hospital. Investigations indicated the common items of food to be fish, liver, and gravy, and that a salmonella infection was most likely. Only a sample of liver and gravy were available for examination, but no pathogenic organisms were isolated.

4. In September, 24 Bantu developed symptoms of abdominal pain, diarrhoea, vomiting and fever approximately 12 hours after the consumption of whale meat. Investigations revealed that the whale meat had been stolen from a carcass and cooked the previous day. The meat was then stored in a plastic bag and subsequently sold in portions to the patients to be. Specimens of whale meat were obtained and *Clostridium welchii* was isolated, doubtless the cause of the food poisoning.

IV. TUBERCULOSISINTRODUCTION

The following figures represent the number of known current cases of pulmonary tuberculosis in Durban as at the end of the year 1970:

Race	City Cases	Ex-City Cases
European	730	74
Coloured	812	81
Bantu	10 644	3 245
Asiatic	4 290	256
Total	16 476	3 656

Closed case files are not included in this table. City cases are those which have been assessed as the financial responsibility of this Municipality, while the ex-City cases are those for whom Durban is not financially responsible. This ex-City group comprises:

- (i) cases living outside the Durban Municipal area but working and receiving treatment in Durban;
- (ii) country cases (particularly Bantu) who have come to Durban because of their illness and are then found to be suffering from pulmonary tuberculosis whilst sojourning in this City;
- (iii) known pulmonary tuberculosis cases who are either visiting relatives or have permanently moved to Durban.

The total number of City cases is 7,79% lower and ex-City cases 1,85% lower, than last year. This apparent reduction occurred in the European and Coloured race groups and was largely due to a special drive to remove the files of those cases who had been stable for some time and did not warrant further follow up, either at home or clinic.

STATISTICS OF CITY CASES(a) Pulmonary Tuberculosis(i) Notifications

The number of notifications of pulmonary tuberculosis received during 1970 is set out in the following table, together with the figures since 1961:

Year	E	C	B	A	Total
1961	117	96	1 648	416	2 277
1962	129	85	1 524	332	2 070
1963	121	77	1 355	316	1 869
1964	121	110	1 256	479	1 966
1965	100	98	1 336	532	2 066
1966	102	105	1 656	549	2 412
1967	133	149	1 566	575	2 423
1968	79	103	1 262	495	1 939
1969	81	100	1 234	469	1 884
1970	95	124	1 099	459	1 777

The corresponding attack rates per 1 000 population were:

Year	E	C	B	A	Total
1961	0,70	3,74	8,82	1,86	3,78
1962	0,76	3,21	8,03	1,44	3,35
1963	0,70	2,82	7,04	1,33	2,97
1964	0,69	3,91	6,43	1,96	3,06
1965	0,56	3,03	6,74	2,12	3,14
1966	0,56	3,52	8,23	2,14	3,60
1967	0,76	4,85	7,68	2,18	3,55
1968	0,42	3,27	6,11	1,83	2,78
1969	0,42	3,09	5,89	1,69	2,66
1970	0,49	2,91	5,48	1,58	2,45

The age group distribution of pulmonary tuberculosis cases notified during 1970 was:

Ages	E	C	B	A	Total
0 - 4 years	5	32	154	62	253
5 -14 years	2	20	98	56	176
15 -24 years	3	7	122	118	250
25 -44 years	30	30	502	146	708
45 -64 years	42	30	202	63	337
65 years and over	13	5	21	14	53
Total	95	124	1 099	459	1 777

Source of Notifications

Of the 1 777 new pulmonary tuberculosis cases notified, the sources of notification were:

Tuberculosis clinics	1 339
Hospitals	429
Private Practitioners	9

Comment

Of the 1 777 notifications, 27 were in respect of children 0-4 years old with a positive Tuberculin test and no evidence of pulmonary tuberculosis radiologically, or of having received B.C.G. immunisation. The diagnostic criteria for purposes of notification of pulmonary tuberculosis were altered in 1965, to include this group, possibly to enable index cases to be traced amongst home contacts of the child. Notifications received since January 1969 have been analysed and in only one instance were further cases in the same household notified, and then in two children aged six and eight years only, all adult contacts being clear. The discovery rate of pulmonary tuberculosis cases among home contacts of cases with positive radiological findings, on the other hand, is as high as 10,3% at this department's clinics. It is considered that the category 0-4 years without positive radiological findings but with a positive Tuberculin test, should be removed from the criteria for diagnosis of pulmonary tuberculosis as a notifiable disease.

Once again it is pleasing to record an overall reduction in the attack rate of pulmonary tuberculosis, particularly in respect of the Bantu. While the actual number of notifications decreased for the Bantu and Asiatics, the European and Coloured notifications were higher than in 1969.

As far as incidence according to age group is concerned, there has been a noticeable overall decrease in notifications up to 24 years of age, and an increase in notifications in adults over 24 years, compared with the 1969 figures. This pattern is particularly influenced by the Bantu race group.

(ii) Deaths

Deaths of City cases, corrected for inward and outward transfer, are set out below together with the figures since 1961:

Year	E	C	B	A	Total
1961	14	13	129	42	198
1962	14	15	133	37	199
1963	14	6	129	22	171
1964	9	8	108	23	148
1965	15	13	120	30	178
1966	11	10	57	19	97
1967	9	7	82	24	122
1968	7	10	73	16	106
1969	6	3	50	21	80
1970	7	5	65	19	96

The corresponding death rates per 1 000 population were:

Year	E	C	B	A	Total
1961	0,08	0,51	0,69	0,19	0,33
1962	0,08	0,57	0,70	0,16	0,32
1963	0,08	0,22	0,67	0,09	0,27
1964	0,05	0,28	0,55	0,09	0,23
1965	0,08	0,44	0,60	0,11	0,27
1966	0,06	0,33	0,28	0,07	0,14
1967	0,05	0,23	0,40	0,09	0,18
1968	0,04	0,32	0,35	0,06	0,15
1969	0,03	0,09	0,24	0,08	0,11
1970	0,04	0,11	0,32	0,06	0,13

(b) Non-Pulmonary Tuberculosis

(i) Notifications

The total notifications of non-pulmonary tuberculosis since 1961 are set out below:

Year	E	C	B	A	Total
1961	1	4	102	44	151
1962	14	5	56	33	108
1963	2	-	50	30	82
1964	6	1	50	44	101
1965	2	2	50	48	100
1966	2	-	45	37	85
1967	-	-	29	31	60
1968	1	-	45	37	83
1969	-	1	35	41	77
1970	1	1	31	23	56

These 56 notifications for 1970 have been analysed according to age groups:

Ages	E	C	B	A	Total
0- 4 years	-	-	1	2	3
5-14 years	-	-	5	1	6
15-24 years	1	1	2	8	12
25-44 years	-	-	15	9	24
45-64 years	-	-	8	3	11
65 years and over	-	-	-	-	-
Total	1	1	31	23	56

Comment

A further 34 cases were notified as suffering from pulmonary tuberculosis in addition to other existing tuberculous involvement. Of the total 90 infections of non-pulmonary tuberculosis, the commonest conditions were:

Tuberculous lymphadenitis	26 cases
Tuberculous bone and joint conditions	15 cases
Tuberculous peritonitis	13 cases
Tuberculous endometritis	7 cases
Tuberculous meningitis	6 cases

It is noteworthy and gratifying that only six cases of tuberculous meningitis were recorded, compared with 18 in 1969.

(ii) Deaths

The number of deaths from non-pulmonary tuberculosis since 1961, corrected for inward and outward transfers is reflected hereunder:

Year	E	C	B	A	Total
1961	1	2	32	14	49
1962	-	3	36	11	50
1963	1	-	19	10	30
1964	1	-	28	12	41
1965	1	1	21	5	28
1966	1	5	29	5	40
1967	1	1	29	9	40
1968	-	2	17	5	24
1969	-	2	12	7	21
1970	-	-	4	2	6

The corresponding death rates, per 1 000 population are as follows:

Year	E	C	B	A	Total
1961	0,006	0,078	0,171	0,062	0,081
1962	-	0,113	0,190	0,048	0,081
1963	0,006	-	0,099	0,042	0,048
1964	0,006	-	0,143	0,049	0,064
1965	0,005	0,034	0,105	0,019	0,042
1966	0,006	0,167	0,144	0,019	0,059
1967	0,005	0,033	0,142	0,034	0,059
1968	-	0,063	0,082	0,019	0,034
1969	-	0,062	0,056	0,025	0,030
1970	-	-	0,020	0,007	0,008

HOSPITAL FACILITIES

Natal is divided into Central, Southern, Northern and Zululand zones for the purpose of admission of pulmonary tuberculosis cases into hospital. Durban falls into the Central zone together with the magisterial areas Umlazi, Pinetown, Camperdown, Ndwedwe, Inanda, Lower Tugela and Mapumulo.

The tuberculosis bed capacities of hospitals situated in the Central zone were as follows:

Hospital	E	C	B	A	Total
1. King George V Hospital	82	60	1 317	155	1 614
2. F.O.S.A. T.B. Settlement	-	-	-	186	186
3. Charles James SANTA Centre, Umlazi	-	-	280	-	280
4. Botha's Hill T.B. Settlement	-	-	177	-	177
5. Osindisweni Mission, Verulam	-	-	181	-	181
6. McCord Mission Hospital	-	-	38	-	38
7. St. Mary's Mission, Mariannhill	-	-	73	-	73
8. Umlazi Mission Hospital	-	-	59	-	59
9. Ekuphilisweni Mission, Kearsney	-	-	46	-	46
10. Illovo Sugar Estates Hospital	-	-	43	-	43
11. Montebello Mission Hospital	-	-	90	-	90
12. Umpumulo Mission Hospital	-	-	47	-	47
Total	82	60	2 351	341	2 834

On the 31st December, 1970, these hospitals contained the following numbers of patients who were this City's financial responsibility:

Hospital	E	C	B	A	Total
1. King George V Hospital	21	14	106	47	188
2. F.O.S.A. T.B. Settlement	-	10	6	43	59
3. Charles James SANTA Centre	-	-	83	-	83
4. Botha's Hill T.B. Settlement	-	-	19	-	19
5. McCord Mission Hospital	-	1	12	1	14
6. Osindisweni Mission Hospital	-	-	-	-	-
7. Umlazi Mission Hospital	-	-	9	-	9
8. St. Mary's Mission Hospital	-	-	3	-	3
9. Illovo Sugar Estates Hospital	-	-	3	-	3
Total	21	25	241	91	378

A further 16 Durban cases were hospitalised in tuberculosis hospitals outside the central zone, viz: Richmond Hospital with 11 Bantu patients, St. Andrews' Hospital, Harding, with one Bantu patient and Rosetta Hospital with four European patients. Only two patients were hospitalised in local Provincial hospitals.

All Hospital Admissions

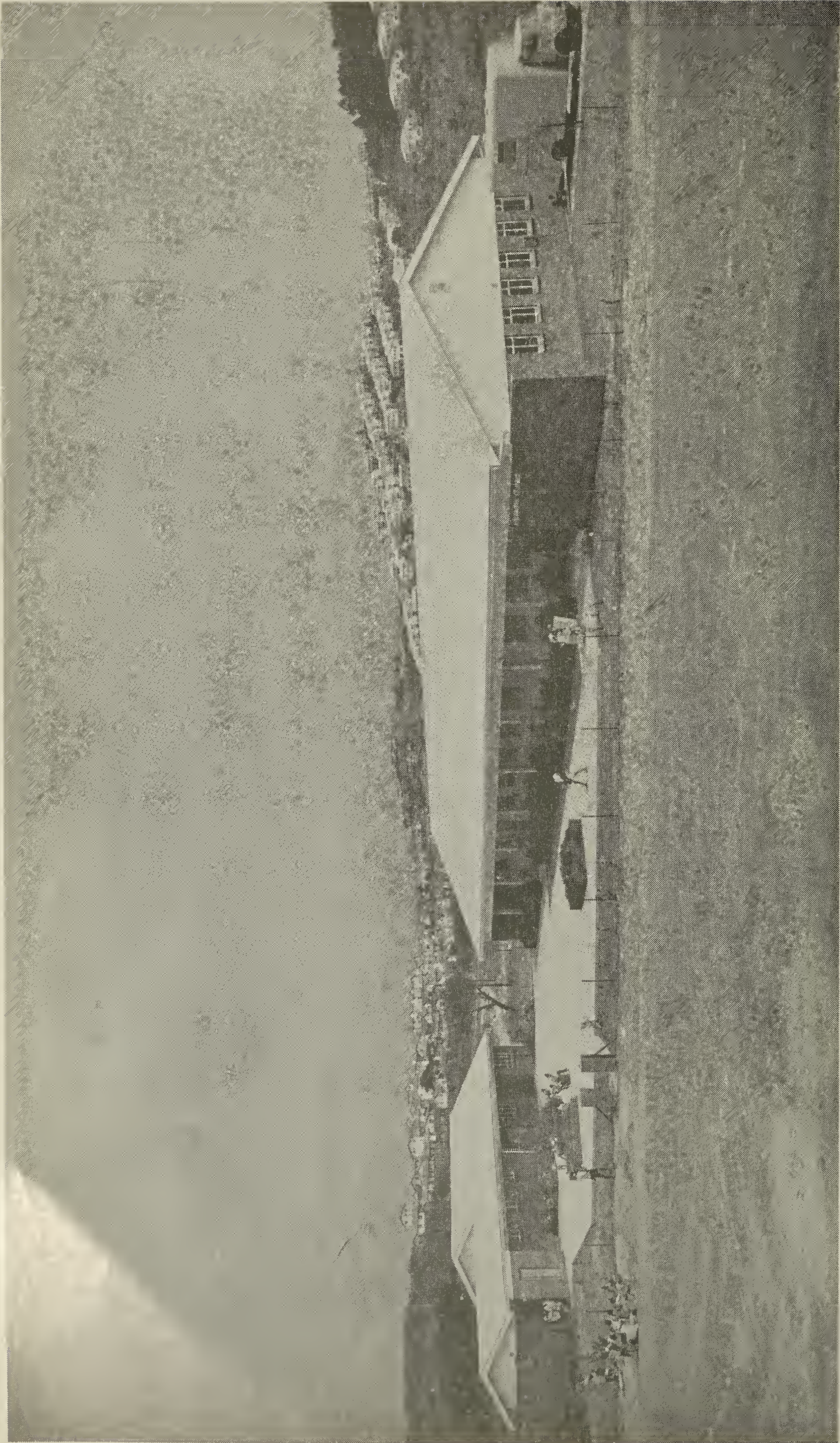
During 1970, a total of 989 City cases were admitted to various hospitals and comprised 100 Europeans, 61 Coloureds, 618 Bantu and 210 Asiatics. This total reflects a considerable decrease compared with the previous year's admissions. Discharges of City cases numbered 1 227 made up of 74 Europeans, 71 Coloureds, 797 Bantu and 285 Asiatics. One hundred and forty one patients absconded or left hospital against medical advice which is much the same as for the previous year. These cases, where possible, were immediately followed up by the field staff of this department to ensure continuation of treatment at the local tuberculosis clinics, and re-hospitalisation where essential.

King George V Hospital

This large hospital is situated within the borough of Durban and is administered by the State Health Department. As at the end of the year, 48% of hospitalised City cases were accommodated in this institution. With the kind permission of the Medical Superintendent, the following statistics referring to King George V Hospital were provided for 1970:

King George V Hospital	E	C	B	A	Total
Admissions	302	92	2 329	335	3 058
Discharges (including deaths)	309	97	2 387	319	3 112
Deaths	28	9	226	30	293

Year	Irregular discharges as a percentage of all discharges	Pulmonary tuberculosis "relapse" rate (ratio of re-admissions to total admissions)
1961	18,5%	15,5%
1962	12,5%	16,8%
1963	13,0%	16,2%
1964	11,0%	17,0%
1965	8,1%	17,3%
1966	8,7%	16,0%
1967	7,0%	9,5%
1968	4,7%	10,9%
1969	5,8%	8,9%
1970	5,2%	8,7%



HEALTH DEPARTMENT BUILDINGS
(CHILD HEALTH CLINIC, CHEST CLINIC AND FIELD WORKS SECTION)
CHATSWORTH TOWNSHIP CENTRE

OUTPATIENT SERVICES

A new Municipal clinic was opened in the Chatsworth township centre during September and necessitated a slight rearrangement of clinic services. The tuberculosis clinic which formerly operated on Tuesdays and Thursdays in the Chatsworth Unit 2 area, now operates on Tuesdays only. The new main tuberculosis clinic in the township centre operates on Mondays and Thursdays. When this latter clinic commenced operation on Mondays, the Cato Manor clinic ceased functioning. All cases that were attending the Cato Manor clinic are now catered for at the Durban Chest Clinic. The following table reflects the available outpatient facilities:

Clinic	Race	Day
Durban Chest Clinic	White and Non-White	Monday to Friday
kwaMashu	Bantu	Monday to Friday
Merebank	Asiatic	Fridays only
Chatsworth Unit 2	Asiatic	Tuesdays only
Chatsworth Township Centre	Asiatic	Mondays and Thursdays
Lamontville	Bantu	Wednesdays only

X-Ray facilities are made available to all clinics.

Clinic Statistics

The following statistics reflect the work performed at departmental pulmonary tuberculosis outpatient clinics during 1970:

Details	Durban Chest Clinic	Cato Manor	kwa-Mashu	Merebank	Chatsworth	Lamontville	Total
Number of Sessions	250	31	249	49	117	51	747
Total Attendances	125 525	3 034	44 747	5 757	17 012	7 550	203 625
Contacts Seen	5 855	150	2 170	169	1 038	387	9 769
Suspects Seen	9 306	172	3 071	1 023	1 812	632	16 016
Tuberculin Tests	5 732	177	2 485	856	1 609	587	11 446
B.C.G. Inoculations	2 555	97	2 973	652	1 140	289	7 706
Streptomycin Injections	15 915	114	4 893	60	478	303	21 763
X-Rays	104 687	597	8 880	1 045	3 771	1 751	120 731

The figures for the Durban Chest Clinic are in respect of the whole current year whereas corresponding figures in the previous year's annual report were in respect of the period 1st April 1969 - 31st December 1969 only. Allowing for this, however, there was a large increase in total attendances, suspects, streptomycin injections and X-Rays.

The Cato Manor clinic closed on 31st August and the statistics until that period showed a general decline in all categories.

While the kwaMashu clinic remained as busy as the previous year, the Southern Areas clinics tended to show a slight decrease in total attendances as well as in one or two other categories.

During 1970 the following numbers of suspects and contacts were admitted to the clinics for the first time:

Durban Chest Clinic	Cato Manor	kwa-Mashu	Merebank	Chatsworth	Lamontville	Total
15 161	321	6 724	1 190	2 835	1 016	27 247

Investigations of these persons yielded the following cases of pulmonary tuberculosis:

Details	Durban Chest Clinic	Cato Manor	kwa-Mashu	Merebank	Chatsworth	Lamontville	Total
Pulmonary tuberculosis cases	600	37	398	38	191	97	1 361
Pulmonary tuberculosis cases as a percentage of clinic admissions	3,9%	11,5%	5,9%	3,2%	6,7%	9,5%	5,0%

At the Durban Chest Clinic influx control and pre-employment X-Rays are undertaken in addition to the suspects and contacts mentioned above. The following figures are relevant:

Bantu Influx Control			Bantu Total		
			24 618		
Pulmonary Tuberculosis cases as % total X-Rayed			0,73%		
Pre-employment	E	C	B	A	Total
	3 611	1 466	14 881	12 695	32 653
Active Pulmonary Tuberculosis cases as % of total X-Rayed	0,02%	0,14%	0,2%	0,09%	-

No difficulties were experienced with the supply of Tuberculin and B.C.G. vaccine from the State Health Department during the year. Tuberculin testing and B.C.G. administration continued uninterruptedly at the various clinics and during the annual school B.C.G. programme. The following table analyses the tests performed at the various clinics:

Tuberculin Tests	Durban Chest Clinic	Cato Manor	kwa-Mashu	Merebank	Chatsworth	Lamontville
Tests done	5 732	177	2 485	828	1 613	671
Tests read	3 442	151	1 985	707	1 511	605
% Read	60,1%	85,5%	79,8%	85,5%	93,5%	90,1%
Positive	1 317	60	948	261	554	272
Negative	2 125	91	1 037	446	857	333

B.C.G. ADMINISTRATION

In Durban B.C.G. is administered to the following major groups:

- (i) Newborns delivered at King Edward VIII Hospital, McCord Zulu Hospital, St. Aidan's Mission Hospital and the Shifa Hospital;
- (ii) Tuberculin negative reactors attending the tuberculosis clinics; and
- (iii) Tuberculin negative reactors discovered on routine testing of Non-White school children.

Asiatic, Bantu and Coloured schools were visited and Class I, Standard VI and Standard X pupils at the Bantu schools, and Class I and Standard VIII pupils at the Asiatic and Coloured schools were Tuberculin tested and those negative given B.C.G. vaccine.

The number of B.C.G. immunisations administered in the City during the year was made up as follows:

Newborns at King Edward VIII Hospital	18 306
Newborns at McCord Zulu Hospital	2 127
Newborns at St. Aidan's Mission Hospital	3 651
Newborns at Shifa Hospital	463
Municipal Tuberculosis clinics	7 705
Non-European schools	9 015
	<hr/>
Total	41 267
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FIELD WORK AND CONTROL PROGRAMMES

The total field staff at the year end responsible for tuberculosis field work comprised five European Health Visitors, one European Health Inspector, 17 Bantu and eight Asiatic Health Assistants. They are responsible for the investigation of tuberculosis cases, referral of contacts and suspects, maintaining contact with pulmonary tuberculosis cases and their families, and for tracing defaulters.

Field visits during the year totalled 69 489 (79 100 in 1969), made up of 5 607 visits to Europeans, 3 966 to Coloureds, 36 917 to Bantu and 22 999 to Asiatics.

MOBILE MASS X-RAY FOR COMMERCE AND INDUSTRY

The State Health Department operates 70 mm mobile

mass X-Ray units to provide a pulmonary tuberculosis screening service for commerce and industry at 28 cents per head. During the year, 40 788 X-Rays were taken in Durban.

SUPPLEMENTARY FEEDING OF INDIGENT TUBERCULOSIS CASES

A sum of R9 000, subject to 7/8ths refund by the State Health Department, was available for the year to purchase suitable foodstuffs for supplementing the diet of indigent tuberculosis patients. A special vitaminised maize supplement, as well as protein supplement, were included in these food parcels. The parcels were made up at this Department's central premises and then distributed to patients at the various clinic centres.

During 1970, 7 295 rations were distributed which was higher than the 6 690 rations given out in 1969.

The table below reflects the number of patients on rations, as well as the rations given them during the year:

Age Group (Years)	European		Coloured		Bantu		Asiatic		Total	
	Patients	Rations	Patients	Rations	Patients	Rations	Patients	Rations	Patients	Rations
0-4	-	-	1	5	9	316	24	976	34	1 297
5-8	-	-	5	182	17	636	21	793	43	1 611
9-12	2	14	1	52	10	215	6	207	19	488
13 and over	-	-	20	506	97	2 691	21	702	138	3 899
Total	2	14	27	745	133	3 858	72	2 678	234	7 295

DOMICILIARY ASSISTANCE

The Natal Anti-Tuberculosis Association, a foundation member of the South African National Tuberculosis Association, is responsible for a considerable amount of care relief in the form of financial aid to families stricken with tuberculosis. The five European tuberculosis Health Visitors from this Department serve on the "Care Committee" and provide the necessary information regarding the circumstances of Durban tuberculosis cases and their families which are thoroughly investigated before any grants are made.

The following extracts have been made from the Association's 1970 report, with their kind permission:

" When it is realised that the Association assists some four hundred families monthly, the magnitude of the task will be realised, and we are continually on the look-out for ways and means of increasing funds with a view to improving such assistance. A regular annual contribution from the King George V Silver Jubilee Fund for Tuberculosis, which is used specifically for care work, is received. We are grateful to the Trustees for this grant, but regret that this year it was reduced by R600. It is possible that this may be reinstated in the future.

During the last five years the amounts expended on actual grants have been as follows:

1966	R17 325
1967	17 525
1968	17 445
1969	19 006
1970	16 241

Other avenues of help are also explored, such as the obtaining of rent and school fee remissions, applying for State disability and maintenance grants, unemployment insurance, old age pensions, etc., and in approaching employers in connection with sick pay entitlements and the re-employment of the patient when fit for work. It will thus be seen that care work is not confined to the giving of grants only, but involves a lot of research and administrative work.

It will be noticed that the total sum distributed during the last year is slightly down on previous years, but this is due to a number of factors, viz:

- (a) a considerable decline in the number of European cases requiring assistance;
- (b) a reduction in the period taken for disability grants to Coloured patients to come through, from six to four months;
- (c) a distinct drop in the number of Bantu patients at Charles James SANTA Centre requesting assistance for their families; and
- (d) investigations carried out through various welfare officers and medical officers at clinics into Bantu cases who had been receiving assistance over very long periods, the outcome of which has been a number of cases being certified as no longer in need of assistance.

Arising out of these various causes, the Care Committee has been able to step up the amount of assistance granted, particularly in Bantu cases, in a direct ratio to the number of dependants, each case being dealt with on its merits. Grants are sent by registered post to dependants throughout the Province and elsewhere, and every month a large number of out-patients are paid at the Durban Chest Clinic, where facilities are provided by the kind courtesy of the City Medical Officer of Health. This also keeps us in touch with the progress of these patients.

It is perhaps appropriate here to mention the gifts of clothing (especially from the Victoria League) we receive from time to time which are distributed to needy persons by the Health Visitors, and also to convalescent patients at Lilleshall Hostel through the Matron."

V. VENEREAL DISEASESINTRODUCTION

This report is in respect of all special clinics operated in this City but does not reflect cases treated at hospitals, by district surgeons or private practitioners, as no return to the local authority is legally required.

There are three special clinics in Durban. They are situated at Addington Hospital for Europeans and Coloureds, at King Edward VIII Hospital for Bantu and Asiatics, and in the kwaMashu Bantu Township for Bantu only. The clinic at Addington Hospital is conducted by the Provincial Administration on behalf of the Durban City Council and those for Asiatics and Bantu by the City Health Department.

NEW CASES

The total number of new cases of all races seen in Durban at the special clinics during 1970 was 25 600 compared with 22 808 for 1969. Of these, 17 739 were new City cases representing a rate of 2.44 per 100 population. A fractional annual increase is shown in the table below which sets out the numbers of new City cases in each racial group since 1967, with the rate per 100 population indicated in parenthesis:

Year	E	C	B	A	Total
1967	610 (0,33)	427 (1,39)	12 467 (6,12)	791 (0,30)	14 295 (2,09)
1968	601 (0,32)	366 (1,16)	14 011 (6,78)	770 (0,28)	15 748 (2,26)
1969	548 (0,39)	336 (1,04)	14 309 (6,83)	869 (0,31)	16 062 (2,26)
1970	567 (0,29)	319 (0,75)	15 753 (7,85)	1 100 (0,38)	17 739 (2,44)

TOTAL ATTENDANCES

The total attendances of City and ex-City cases at all three clinics was 62 603, an increase of 12,49 per cent over the previous year's total of 55 654.

(N.B. This table refers to number of diseases diagnosed NOT number of cases)

DETAILS	NEW CASES										TOTAL ATTENDANCES									
	Eur.		Col.		Bantu		Asiatic		Total		Eur.		Col.		Bantu		Asiatic		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1. Sero-negative Primary Syphilis										1			1			2			1	2
2. Sero-positive Primary Syphilis	51	11	47	13	1 068	276	23	2	1 189	302	205	46	212	46	3 407	782	58	10	3 882	884
3. Secondary Syphilis			1	1	139	696	3	8	143	705	3		4	7	372	1 673	4	29	383	1 709
4. Tertiary Syphilis (clinically recognised)															6			6		
5. Latent Syphilis (diagnosed on result of serological test alone)	1				692	770	23	24	716	794	15	3	17	3	2 834	2 519	61	77	2 927	2 602
6. Neuro-Syphilis																				
7. Congenital Syphilis (under 1 year)					57	41	1	1	58	42					150	185	11	1	161	186
8. Congenital Syphilis (over 1 year)					9	10	1		10	10					32	27	1	3	33	30
Total Syphilis	52	11	48	15	1 965	1 793	51	35	2 116	1 854	223	49	234	56	6 801	5 188	135	121	7 393	5 414
9. Gonorrhoea	445	49	201	19	4 605		207		5 458	68	1 297	127	719	70	11 583		412		14 011	197
10. G.C. Vulvo-vaginitis				5	25	1 059		216		1 280				5	57	2 192		388		2 585
11. G.C.Ophthalmia						31		4	25	35						78	1	7	58	85
Total G.C. Infections	445	49	201	24	4 630	1 090	207	220	5 483	1 383	1 297	127	719	75	11 640	2 270	413	395	14 069	2 867
12. Ulcus Molle			3	1	2 446	449	126	38	2 575	488			8	1	6 687	1 072	330	82	7 025	1 155
13. Lymphogranuloma Venereum					30	3			30	3					77	15	1		78	15
14. Granuloma Inguinale					67	5	2		69	5					132	10	2		134	10
15. Venereal Warts	5		7		538	144	7	9	557	153	12		24		1 638	383	33	18	1 707	401
16. Non-specific Urethritis	15		10		6 613	28	146	14	6 784	42	55	5	27	4	14 588	67	265	15	14 935	91
17. Non-Venereal	75	25	46	8	549	3 732	56	389	726	4 154	210	36	160	22	1 309	6 839	109	688	1 788	7 585
Total	95	25	66	9	10 243	4 361	337	450	10 741	4 845	277	41	219	27	24 431	8 386	740	803	25 667	9 257
Grand Total	592	85	315	48	16 838	7 244	595	705	18 340	8 082	1 797	217	1 172	158	42 872	15 844	1 288	1 319	47 129	17 538
Total of Races	677		363		24 082		1 300		26 422		2 014		1 330		58 716		2 607		64 667	

STATISTICAL SUMMARY : CITY AND EX-CITY CASES TREATED IN 1970

Details	European				Coloured				Bantu				Asiatic				Total		Grand Total
	City		Ex-City		City		Ex-City		City		Ex-City		City		Ex-City		City	Ex-City	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F			
New cases	479	88	223	2	264	55	57	1	12 229	3 524	3 912	3 500	514	586	72	94	17 739	7 861	25 600
Total Attendance	1 637	247	336	4	1 137	182	104	3	32 051	8 245	9 013	7 127	1 118	1 082	151	166	45 699	16 904	62 603

CLINIC SERVICES

Addington Hospital: This clinic, conducted by the Provincial Administration, is situated in the grounds of Addington Hospital. The Durban Municipality reimburses the Provincial authorities on a per capita basis in respect of City cases treated. One session is held each day from Monday to Saturday for Europeans and Coloureds. Attendances (City and ex-City cases) for the year were as under:

Race	New Cases			Total Attendances		
	M	F	Total	M	F	Total
European	702	90	792	1 973	251	2 224
Coloured	297	48	345	1 191	169	1 360

Congella and kwaMashu: The Congella clinic is conducted by this Department but is situated in the grounds of the King Edward VIII Hospital. This clinic is open all day Mondays to Fridays with a late session on Tuesday afternoons.

The kwaMashu clinic is also conducted by this Department and functions for one three-hour morning session per week at Goodwin's Cottage in the kwaMashu Bantu Township.

Attendances (City and ex-City cases) at these two clinics during the year were:

Race	New Cases			Total Attendances		
	M	F	Total	M	F	Total
Bantu	16 141	7 024	23 165	41 064	15 372	56 436
Asiatic	610	688	1 298	1 319	1 264	2 583

TREATMENT

During 1970 samples of "Bactrim" have been on trial as a one-dose treatment for gonorrhoea. A dose of 8 to 10 tablets stat. was found to give a satisfactory response, curing about 89 per cent of cases.

Benzathine penicillin is used at the clinic and appears to be giving excellent results. During October, an adult male Bantu patient died after an injection of

1 gram of streptomycin. Postmortem findings were compatible with death due to anaphylaxis. This death was very disturbing as it is the first streptomycin death recorded by this Department either at the special clinic or, more important still, at any of the tuberculosis clinics. It was considered that penicillin contamination might have been a factor in this instance, but this could not be substantiated after the event.

ADMISSIONS TO HOSPITAL

In accordance with State policy in limiting hospitalisation of these diseases no cases of venereal disease were admitted to any hospital during the year, although doubtless there were cases of hardship or which could have benefitted from a short stay in an institution.

CONTACTS

Contact tracing continued to be fruitful and 54,81 per cent of contacts cited by patients attended for investigation and treatment at King Edward VIII Hospital and kwaMashu clinics.

DEFAULTERS

During the year a system for determining defaulters was introduced at the clinic and has been very successful. Defaulters are only traced once and this resulted in no less than 40 per cent of them re-attending the clinic.

LABORATORY EXAMINATIONS

(a) Departmental Side-room

Examinations were undertaken on urethral and vaginal smears and spun urine deposits for gonococci and other organisms. At the Congella and kwaMashu clinics the following examinations were performed:

Smears	-	26 152 with 8 018 positive for gonococci (30,66%)
Urines	-	1 419 with 666 positive for gonococci (47%)

(b) State Laboratory

The findings of serological examinations carried out at the State Laboratories in Durban for Congella and

kwaMashu special clinics' patients, are set out below:

Kolmer	}	reactions:	26 093 tests with
VDRL			8 165 positive findings
			(31,29%)

ANTE-NATAL CASES

A total of 2 692 ante-natal cases attending the Congella and kwaMashu clinics were serologically tested. Of these 822 (30,53%) were found to be positive and so received treatment.

VI. FAMILY HEALTH

The justification for and the work of a Maternal and Child Health Section is usually taken for granted in the overall activities of a local authority health department. It is then not surprising that the importance of certain fundamentally basic factors may be overlooked, an example of this being family size. The Maternal and Child Health Section of most health departments has in fact, and in line with modern thinking on preventive and promotive health, become a family health service. To consider the relationship between family size and maternal and child health would thus seem both pertinent and important.

Despite improved medical standards, death and sickness continue to take their toll of many mothers and young children. Frequent pregnancies and large families are factors that contribute to the problem of high morbidity and mortality rates among the most vulnerable groups of the population. Many social, cultural and economic factors affect the health of mothers and children and, in the absence of supporting statistics, it is not easy to assess the effects of a single variable such as family size. Even where data are available, geographical differences and the varying pace of socio-economic changes in different countries may preclude such evidence from being utilised elsewhere. Long-term interaction of social and biological experiences are manifested in varying patterns of child-bearing. In the past, as now, it seems that high fertility and high mortality rates have been interrelated.

Nor are mortality rates the only consideration. World experience shows that the hope of positive health for both mother and child with an acceptable standard of nutrition in reasonable living conditions is endangered by excessive family size.

Once the child comes solely under maternal care the influences of maternal experience and social class come into effect and environmental factors start exerting an influence within the first few days. Maternal education and experience is thus of the greatest importance in ensuring the survival of infants in the first year of life. After that first crucial year maternal efficiency continues to influence the emotional, physical and intellectual growth and development of the child.

The question of legalised abortion in population control is mentioned only because apart from being unacceptable to many for a wide variety of reasons the procedure is a very poor second to adequate contraceptive measures.

Death rates vary with ethnic group and socio-economic status within a country and a wide divergence is evidenced between mortality rates in the western world and those in developing countries. Despite these differences it is well for the public health worker to approach the problem with an awareness that the lowest death rates possible will be achieved not only where adequate medical supervision is available, but also where all can grow up and live in a healthy environment and are well nourished, where all first births take place at a relatively early maternal age, where women do not wear themselves out by too frequent child-bearing and where mothers have adequate knowledge and facilities for child care.

It was appropriate therefore that one of the features of the work of this section during the year was the expansion of the family planning services and that being regarded as an integral part of maternal and child health programmes, such services are conducted in conjunction with child health sessions.

The duties and responsibilities of the section embrace all racial groups and areas of the City and require a large staff. Details of the staff establishment of the Section for 1970 and the two preceding years are tabulated below. Staff allocated to Immunisation Services (which is organised as part of the Section) are included.

Post	E	C	B	A	Total 1970	Total 1969	Total 1968
Senior Clinical Medical Officer	1	-	-	-	1	1	1
Clinical Medical Officer	1	-	-	-	1	1	1
Part-time Medical Specialists	1	-	-	-	1	1	1
Part-time Clinical Medical Officer	6	-	-	1	7	5	5
Chief Health Visitor	1	-	-	-	1	1	1
Deputy Chief Health Visitor	1	-	-	-	1	1	1
Senior Health Visitor	1	-	2	2	5	3	3
Health Visitor	23	4	18	15	60	56	51
Clinic Sister	5	-	-	-	5	5	5
Nurse	-	-	4	10	14	12	12
Clinic Assistant Nurse Aide	9	-	-	-	9	10	10
Overseer	-	*5	16	27	48	44	40
Health Assistant	-	-	-	1	1	1	1
General Assistant	-	-	4	4	8	8	8
Interpreter	2	-	-	1	3	3	3
Cleaner	-	-	8	10	18	15	15
Watchman	-	-	1	-	1	1	-
Total	51	9	53	71	184	168	158

* Includes 1 nurse-aide/seamstress

In addition to the abovementioned medical officers, it was again possible to utilise a "panel" of four medical practitioners, two of whom provided regular medical coverage for school immunisation programmes throughout the year, and three assisted at child health clinics when required during staff shortage. The steady expansion of staff establishment reflected in the above table has been primarily to meet the increased demands of the family planning service.

A. MATERNAL HEALTH

(i) Ante-Natal Clinics

An ante-natal clinic service is provided by the Department for Europeans, Coloureds and Asiatics who elect to be confined in their own homes by registered European and Coloured midwives as well as unregistered Asiatic midwives authorised to practice within the Durban Municipal area. A medical officer is in attendance at all clinics, and the routine of taking smears from most attenders for exfoliative cytology continued. Of the 474 cases so examined, no cases of malignancy were reported. There is a limited district midwifery service operating only during the daylight hours for Europeans and Coloureds from Addington Hospital and a similar service for the Asiatic and Bantu groups is also provided by the Natal Provincial Administration. At kwaMashu restricted midwifery facilities continued to be provided at the Provincial Administration's polyclinic.

Post-natal visits to all races are undertaken by health visitors who follow up birth notifications. Details of attendances at departmental ante-natal clinics, and home visits, are set out below:-

Details	E	C	A	Total 1970	Total 1969
Ante-natal clinic sessions	12	12	96	120	121
Attendances	52	79	1 378	1 509	1 518
Rhesus Factor Tests	23	31	487	541	624
Exfoliative Cytology Tests	17	24	433	474	530
Haemoglobin Tests	20	30	516	566	659
Kolmer/VDRL Tests	21	31	482	534	608
Ante-natal Visits	40	7	154	201	362
Post-natal Visits	3	9	507	519	442

Of the 1 509 cases it was necessary to refer 112 Asiatics for hospital delivery due to excessive multiparity or a history of previous complicated confinements.

(ii) Facilities for Maternity Cases

Accommodation for maternity cases in Durban is provided at the following Provincial and private hospitals:

Institutions	Maternity Beds				
	E	C	B/A	Total 1970	Total 1969
1. <u>Provincial</u>					
Addington Hospital	50	30	-	80	84
King Edward VIII Hospital	-	-	**211	211	211
2. <u>Private</u>					
St. Aidan's Hospital	-	-	+ 24	24	24
St. Augustine's Hospital	30	-	-	30	38
McCord's Zulu Hospital	-	-	** 71	71	68
Mothers' Hospital	46	-	-	46	46
Parklands Nursing Home	22	-	-	22	24
Shifa Hospital	-	-	* 12	12	14
Total	148	30	318	496	509

* Coloured, Bantu and Asiatic
 ** Bantu and Asiatic combined
 + Asiatic only

(iii) Supervision of Midwives

Listed midwives are supervised by a European Health Visitor, who examines their equipment and registers and regularly makes home visits to ante-natal

and post-natal cases, to cases of stillbirth and to midwife's homes. All notified cases of ophthalmia neonatorum and puerperal sepsis are investigated by a health visitor from the Epidemiology Section.

Details of midwife supervision are set out below:

Details	E	C	A	Total 1970	Total 1969
Certificated mid- wives listed	1	2	-	3	4
Confinements attended	30	40	59	129	201
Non-certificated midwives listed	-	1	40	41	45
Confinements attended	-	11	638	649	652
Confinements by unlisted midwives (i.e. illegal operators)	-	-	32	*32	19
Midwives appliances examined	1	6	269	276	318
Visits to Midwives at home	1	3	214	218	255
Warnings to un- listed midwives	-	-	4	4	1
Warnings to listed midwives	-	-	-	-	1
Prosecution: illegal midwifery (unlisted midwife)	-	-	1	1	-

* This figure represents only those cases of illegal midwifery traced and visited post-natally and does not include an alleged number of births unknown to the Supervisor of Midwifery.

(iv) Total Number of Confinements conducted in Durban by Midwives on district only (including midwives employed by the Natal Provincial Administration)

Midwives	E	C	B	A	Total 1970	Total 1969
Certificated	32	60	710	68	870	1 340
Non-Certificated	-	17	-	641	658	666
Total	32	77	710	709	1 528	2 006

(v) Family Planning

During 1962 the Department seconded a part-time Clinical Medical Officer to the Natal Association of Maternal and Family Welfare and in 1963 the City Council authorised the appointment of an Indian nurse to assist at that Association's clinics. In 1967 the Durban City Council adopted a recommendation that there be a phased takeover of family planning services from that Association. Accordingly, in August 1967 one clinic for Asiatics was commenced at Merebank and two at Chatsworth. Because difficulty was experienced in recruiting medical officers to fill vacant posts, no further expansion was possible until September 1969 when a clinic was commenced at Newlands for Bantu and Asiatics, and it was only in August 1970 that three further clinics could be established viz: two for Bantu at Lamontville and kwaMashu and one for Coloureds at Sparks Estate. Future expansion will depend on the availability of suitable clinic venues and an increase in staff establishment.

All family planning clinics are conducted as part of the integrated family health service in conjunction with established child health clinics and with a medical officer in attendance to whom all new cases, and those old cases due for re-examination, are referred. The majority of clinic attenders are on the oral contraceptive regime with a lesser percentage on a long acting progesterone by injection at three monthly intervals. No mechanical or intra-uterine devices are used. A total of 1 741 injections were given in 1970.

Details of attendance at Family Planning clinics are tabulated below:

Venue	Sessions	First Attend- ance	Re- attend- ance	Total 1970	Total 1969
<u>Coloured</u>					
Sparks Estate (from 16.9.70)	14	135	124	259	-
<u>Bantu</u>					
Newlands	43	10	81	91	48
Lamontville (from 18.9.70)	16	155	167	322	-
kwaMashu (from 15.9.70)	16	244	265	509	-
Total	75	409	513	922	48
<u>Asiatic</u>					
Chatsworth Unit 2	150	580	7 467	8 047	6 373
Chatsworth Unit 10	147	1 045	9 645	10 690	8 016
Newlands	51	147	782	929	90
Merebank	147	256	5 002	5 258	4 570
Total	495	2 028	22 896	24 924	19 049
Grand Total	584	2 572	23 533	26 105	19 097

Of the total attendance of 26 105, 7 137 patients were examined by medical officers, compared with 3 735 in 1969. Extensive records are kept of all cases. Defaulters, who continued to present a problem, were visited at home to ascertain the reason for default.

In the Asiatic group the total attendances showed an increase of 5 875. This is noteworthy as this race tends to have large families, but have been slow to respond to family planning and so have required constant and concentrated health education on the subject.

(vi) Cervical Exfoliative Cytology

In addition to the genital cytology, performed as a routine in the Department's ante-natal clinics, this City Council since 1963 has offered a cytology service to Durban women attending private medical practitioners. In the former the slide examinations are performed at the State Health Laboratory in terms of Government Notice No.514 of 1966, whilst in the case of the latter (Council scheme), are processed by the Cytology Unit of the Natal Provincial Laboratory at Addington Hospital. The cost to the Department is R1-00 per patient but to the patient and practitioner there is no charge in respect of the cytology. The total number of cytology examinations carried out under the Council scheme, for the early detection of cancer, since its inception, appears hereunder:-

Year	Total Examinations	Repeat Examinations	Confirmed Malignancy
1963	2 614	34	12
1964	2 915	324	18
1965	3 807	590	25
1966	4 754	611	26
1967	5 199	630	22
1968	5 785	718	15
1969	7 306	1 326	17
1970	8 192	2 738	16
Total	40 572	6 971	151

The subjoined table further analyses the 1970 totals with particular reference to race and age groups. In addition to the total of initial smears, repeat examinations, i.e. annual or request, are also reflected, because in spite of a steadily increasing figure for total examinations, the total number of confirmed malignancy has remained low over the past several years.

EXFOLIATIVE CYTOLOGY

EXAMINATIONS

YEAR : 1970

AGE GROUP IN YEARS	EUROPEANS				COLOURED				BANTU				ASIATIC				TOTALS			GRAND TOTAL	CONFIRMED MALIGNANCY	
	Ini-tial	RA	RR	Total	Ini-tial	RA	RR	Total	Ini-tial	RA	RR	Total	Ini-tial	RA	RR	1970	1969					
Under 30	2 016	590	35	2 641	37	4	-	41	2	-	-	2	43	7	1	51	2 098	601	36	2 735	5	1
30-39	1 500	812	63	2 375	58	1	1	60	-	-	-	-	36	10	-	46	1 594	823	64	2 481	3	6
40-49	954	665	51	1 670	20	2	-	22	-	-	-	-	27	6	-	33	1 001	673	51	1 725	4	5
50-59	420	293	36	749	4	2	-	6	-	-	-	-	16	1	1	18	440	296	37	773	2	3
Over 60	167	64	13	244	4	1	-	5	-	-	-	-	-	-	-	-	171	65	13	249	2	2
Not Stated	144	73	6	223	1	-	-	1	-	-	-	-	5	-	-	5	150	73	6	229	-	-
Totals	5 201	2 497	204	7 902	124	10	1	135	2	-	-	2	127	24	2	153	5 454	2 531	207	8 192	16	17

RA = Repeat Annual
RR = Repeat Request

Initial Smears = 66,58%
Repeat Annual Smears = 30,90%
Repeat Request Smears = 2,52%
100,00

A possible reason to explain this is that many of the total smears were actually performed as annual or repeat examinations, thus loading the total examinations.

	1970	1969
Total Examinations	8 192	7 306
Confirmed Malignancy	16	17
Initial Smears	5 454	5 980
Percentage of Total	66,58%	82%
Annual Repeat	2 531	1 142
Percentage of Total	30,90%	16%
Repeat Request	207	184
Percentage of Total	2,52%	2%

B. CHILD HEALTH

(i) Clinics

The Child Health clinics in the City, which are held at 34 venues throughout the Municipal area to serve the various racial groups, were well attended during 1970. The major function of the service is advisory and educational for mothers of babies from birth to school-age. Premises used varied from hired halls to purpose-designed municipal clinic buildings. One of the latter is maintained for Europeans and Coloureds in the centre of the City, and three are operated in Indian areas; in addition, two new clinics on enlarged and master clinic lines for Bantu and Asiatics in kwa-Mashu and Chatsworth townships respectively, were nearing completion.

Noteworthy changes effected during the year were:-

- (a) following the finding that the majority of attenders were out of City mothers, the Virginia clinic for Europeans was discontinued on 26.3.1970. Durban-resident mothers were directed to the nearby Durban North venues;

- (b) the Aliwal Street European clinic was moved to more suitable premises at Bay Terrace on 1.8.1970;
- (c) due to the movement of the Indian population to Chatsworth, one Mayville clinic session was curtailed in April;
- (d) because the Cato Manor clinic building had become unsafe the clinic was closed on 31.8.1970 and both the Bantu and Asiatic clinic attenders were referred to the Lancers Road clinic.

Details of sessions and attendances at all clinics are shown in the following tables:

EUROPEAN

Clinic Venue	Sessions	Attendances
Aliwal Street/Bay Terrace	46	3 924
Bellair	25	1 009
Cunningham Road	10	218
Durban North (2 venues)	49	2 237
Fynnlands	49	4 394
Greyville	51	4 577
Hillary	26	1 165
Mayville (Westridge)	51	2 254
Montclair	52	4 264
Morningside	52	3 443
Old Fort Place	51	2 545
Overport	96	3 719
Redhill	28	1 202
Seaview	47	2 316
Virginia (closed 24.3.70)	6	111
Warwick Avenue	198	11 506
Wentworth	51	3 444
Woodlands	51	2 713
Total	939	55 041
Total (1969)	948	52 817

There was an overall increase of 2 224 in attendances. The three most notable increases were:

- (i) Warwick Avenue with an increase of 811 attendances;
- (ii) the new venue at Bay Terrace which proved more convenient for the South Beach and Point area residents, the increase being 838;
- (iii) the Old Fort Place clinic for the North Beach area community with an increase of 652 attendances.

In view of transport difficulties (iii) is considered to be particularly noteworthy and both (ii) and (iii) reflect the increasing density of flat dwellers along the beach front with undoubtedly a preponderance of young couples of child-bearing age.

COLOURED

Clinic Venue	Sessions	Attendances
Austerville	97	12 860
Mayville	91	6 099
Redhill	51	5 348
Sparks Estate	204	12 005
Warwick Avenue	105	6 862
Wentworth Government Village	47	8 226
Total	595	51 400
Total 1969	564	54 225

The decrease in attendances (2 825) is considered to be directly attributable to the shortage of health visitors and the consequential limited time that could be devoted to home visiting.

Although Austerville clinic attendances showed an increase of 1 893, decreases were recorded at Sparks Estate (1 702), Warwick Avenue (1 479), Mayville (841) and Wentworth Government Village (846).

BANTU

Clinic Venue	Sessions	Attendances
Cato Manor (closed 31.8.70)	36	111
Chesterville	202	20 562
Goodwins Cottage)	300	43 079
Rydalvale - both	445	83 782
at kwaMashu }		
Lamontville	398	33 174
Lancers Road	149	18 195
*Newlands	116	1 138
Total	1 646	200 041
Total 1969	1 562	184 895

*Clinic run concurrently with Asiatics but as the Bantu in this area are being moved, there was a 3 045 decrease in Bantu attendances.

The total attendances showed an excellent growth of 15 146; Lamontville clinic provided an increase of 3 683 and Rydalvale an increase of 22 518, due undoubtedly to the two new neighbourhood units in kwaMashu.

ASIATIC

Clinic Venue	Sessions	Attendances
Asherville	99	12 332
Cato Manor (closed 31.8.70)	66	3 810
Chatsworth Unit 2	247	29 134
Chatsworth Unit 10	292	46 810
Clairwood	206	24 276
Lancers Road	251	38 286
Mayville	116	9 832
Merebank	241	22 721
Newlands	195	14 841
Reservoir Hills	50	5 765
Total	1 763	207 807
Total 1969	1 779	181 860

An unprecedented total increase of 25 947 attendances occurred, with all clinics showing an increase but especially Chatsworth Unit 10 (14 311) as occupancy of houses in the new Units 7, 8 and 9 proceeded apace. The Reservoir Hills clinic was extended to an all day session making working conditions easier in these very small premises.

The total number of clinic sessions and attendances for all racial groups were as follows:-

Details	E	C	B	A	Total 1970	Total 1969
Clinic Sessions	939	595	1 646	1 763	4 943	4 853
Clinic Attendances	55 041	51 400	200 041	207 807	514 289	473 797
New Cases	3 274	1 723	10 885	10 655	26 537	27 855
Cases seen by doctor	1 847	3 875	21 337	25 196	52 255	20 619

The significant features here are the 40 492 increase in total clinic attenders and the 31 636 increase in cases seen by doctor, which in no small measure justified the creation of two additional part-time medical officer posts.

(ii) Home Visiting

On receipt of the birth notification, all mothers, except those confined by private practitioners (unless a visit was specifically requested), were visited as soon as possible after discharge from hospital or after termination of midwife's attendances in the homes. Further home visits were made when necessary or routinely, and covered a wide range of facets of child and family health, including feeding, nutrition and behaviour problems, physical illness or handicaps or mental ill health, family planning and immunisation defaulters, as well as routine follow-ups. Throughout all domiciliary visiting, health education was constantly disseminated.

A total of 136 visits were made to "protected" infants, foster children and cases of alleged neglect, at the request of the Durban Child Welfare Society. Two of these were visits to Coloured and 134 were to European children.

The succeeding two tables reflect respectively an analysis of home visiting by the various racial groups of the Child Health staff and an analysis of home visiting to the various race groups:

HOME VISITING BY CHILD HEALTH STAFF

1970

STAFF	Number of Premises Visited	INVESTIGATIONS												Total
		A New Births	B Behaviour Problems	C Routine	D Family Planning	DI Defaulters	E Feeding Advice	F Illness	G Immunisation	H Mental Health	I Health Education*	J Miscellaneous**	K Wasted	
European	16 404	4 061	336	4 245	1 615	142	5 216	2 199	5 070	94	1 977	956	3 295	29 206 (27 999)
Coloured	2 003	764	1	234	136	5	219	29	992	-	11	38	312	2 741 (2 258)
Bantu	18 118	5 700	33	3 590	3 049	12	4 117	1 410	7 277	134	3 417	1 379	3 347	33 465 (27 661)
Asiatic	12 302	5 964	-	63	2 396	2 240	838	71	4 293	9	172	195	1 967	18 208 (17 804)
Total 1970	48 827	16 489	370	8 132	7 196	2 399	10 390	3 709	17 632	237	5 577	2 568	8 921	83 620
Total 1969	43 265	13 024	537	5 227	5 174	1 235	10 139	3 608	18 696	341	7 161	3 183	7 397	75 722

HOME VISITING TO VARIOUS RACE GROUPS

1970

COMMUNITY	Number of Premises Visited	INVESTIGATIONS												Total
		New Births	Behaviour Problems	Routine	Family Planning	De- Faulters	Feeding Advice	Illness	Immunisation	Mental Health	Health Education *	Miscellaneous **	Wasted	
European	10 905	1 833	316	3 411	333	-	3 462	1 843	2 826	55	726	664	2 520	17 989 (16 643)
Coloured	3 687	1 418	7	423	529	5	786	159	1 871	13	556	163	427	6 357 (5 306)
Bantu	18 145	5 706	33	3 610	3 049	12	4 131	1 417	7 296	135	3 429	1 379	3 347	33 544 (29 343)
Asiatic	16 090	7 532	14	688	3 285	2 382	2 011	290	5 039	34	866	362	2 627	25 730 (24 430)
Total 1970	48 827	16 489	370	8 132	7 196	2 399	10 390	3 709	17 632	237	5 577	2 568	8 921	83 620
Total 1969	43 265	13 024	537	5 227	5 174	1 235	10 139	3 608	18 696	341	7 161	3 183	7 397	75 722

NOTE: * Health Education, being constantly disseminated is, of course, an integral part of all home visits.

** Under "Miscellaneous" the following were included: neglect, protected infants, ante-natal cases, handicapped children, kwashiorkor, geriatrics, and any other category not listed.

COMMENT: The above analyses reveal an all round increase in domiciliary work, which in view of health visitor shortages and heavy individual work loads is most noteworthy.

(iii) State Subsidised Skim Milk Powder Scheme

The distribution of State subsidised dried skim milk powder for the prevention of kwashiorkor continued throughout the year at Child Health clinics. A total of 222 844 packets were issued, of which 12 786 packets were given free of charge to indigent families. The majority of this milk was distributed at Non-White clinics, the mothers paying 5 cents per package.

The allocation of skimmed milk powder granted annually by the State Department of Health to this Department was reviewed in 1969 and in the light of the rapid growth of the Non-White population, the proposed opening of new clinics in 1970 and the increasing acceptability of this commodity to these race groups, the allocation was increased from 200 000 lbs. to 240 000 packages per annum. It is obvious that a further review will be necessary in 1971, especially as the 1970 issue was only 17 156 less than the total allowed for the year and the new clinics in kwaMashu and Chatsworth have not yet started functioning.

With metrication the 1 lb. package became a 500 g package and although the price increased accordingly, the cost to the patient remained at 5 cents, with the Council bearing the additional 1c per package.

(iv) Other Dietary Assistance

Additional assistance was given by the Council Bantu Administration Department from the Bantu Revenue Account (Beerhall profits). This included:

- (a) a varying amount of full cream powdered milk issued free of charge and used for special cases, e.g. premature infants and babies too young for skimmed milk powder; and
- (b) fresh milk sold at 3c a pint, also in varying amount; but at least 1 000 pints are allocated to each of the two kwaMashu clinics per day.

Other sources of assistance are through two voluntary organisations which supply in limited quantity:

- (a) full cream powdered milk which is sold at 15c per packet to selected cases where this milk is necessary but parents cannot

afford the retail price. This totalled 9 697 packets; and

- (b) a pre-cooked cereal issued to needy cases and sold at 5c per 1 lb. package or free of charge to indigent cases. This total was 20 970 lbs. of which 2 074 lbs. were free.

(v) Kwashiorkor

Staff continued to pay special attention to cases of kwashiorkor encountered at clinics and when home visiting. Many cases are found, notably in the Bantu townships, especially where the cases have been imported from rural areas or where for some reason or other the family concerned had not yet come within the orbit of the clinic or perhaps have been consistent defaulters. Such cases are urged to attend clinic to receive dietary assistance, are given advice on feeding and nutrition and are all followed up to check on progress. The follow-up visits had the added advantage of presenting an opportunity for checking on the immunisation of siblings and for health education in the home.

Malnutrition

Deaths from malnutrition (including kwashiorkor) under five years, are reflected below:

Year	E	C	B	A	Total
1961	-	2	109	17	128
1962	-	2	102	8	112
1963	-	2	83	4	89
1964	-	1	78	7	86
1965	-	-	72	3	75
1966	-	1	27	3	31
1967	-	3	19	5	27
1968	-	-	52	3	55
1969	-	-	45	-	45
1970	-	-	30	-	30

- Note:
- (a) of the Bantu deaths, 25 were due to kwashiorkor and five to malnutrition other than kwashiorkor;
 - (b) as deaths from kwashiorkor were not investigated during 1969 and 1970, those figures probably include a number of ex-City and imported cases.

(vi) Creches, Play Centres, Places of Care and Nursery Schools

Throughout the year, routine inspections were made to these institutions, most of which cater for children in the 2 - 6 year age group. These are registered either with the Department of Social Welfare, the Department of Coloured Affairs, the Department of Indian Affairs, the Department of Bantu Administration and Development, or the Natal Provincial Administration Education Department. Advice is given on planning, diet, occupation of children and general hygiene. Where new institutions apply for registration or established ones seek to extend, a Departmental "Code of Practice" serves as the yardstick. A total of 49 pre-school institutions were inspected of which 28 were European, five Coloured, 15 Bantu and one Asiatic.

(vii) Children's Homes

It is this Department's policy to advocate the availability of 24-hour trained nursing supervision at children's homes and to insist upon this service in respect of institutions accommodating infants. The organisations which maintain babies' homes of all races in Durban have concurred with this most desirable precaution in the past but in one instance the management has decided, on financial grounds, to discontinue the employment of fully trained nurses in order to avoid a close-down of one of the particular babies' homes.

This decision has been viewed with concern. It is obviously in the infants' interests that qualified staff should be available at all times to meet emergencies. However, despite the absence of qualified staff it is better to have the facility for the protection and upbringing of children in need of care than to have no facility at all.

To clarify the position at official level the Secretary for Social Welfare's views were sought in view of the control of these homes exercised through the Children's Act, and in a reply (52/5/6/2) dated 21st October, 1970, it was intimated "that the Department considers that for babies and infants the services

of a nurse are indispensable. In fact, in addition to the ordinary capitation grants, supplementary subsidies are paid in respect of approved children's homes staff including trained nurses. Under the existing legislation and Departmental regulations and directives, however, the Department cannot compel the management of an institution to appoint trained nurses on its staff."

(viii) Old Age Homes

With the publication of "Regulations Governing the Registration of Homes for the Aged" under the Aged Persons Act No.81 of 1967 (Government Gazette dated 21.11.1969) Old Age Homes in the City are required to apply for registration with the Department of Social Welfare and Pensions, with the Local Authority inspecting the homes and reporting thereon. A Code of Practice was drawn up, to comply with the provisions of the By-laws for Durban and the terms of the Regulations framed under the Act. Accordingly, three homes for aged men and women were registered during 1970. After the initial inspection it is proposed to carry out an annual survey of all such homes in addition to periodic and follow-up visits.

Lectures, Demonstrations and In-Service Training

Lectures, demonstrations and in-service training were given to various categories of students, e.g. pupil midwives from Addington and the Mothers Hospital (European), King Edward VIII and McCord Hospitals (Bantu), students studying for the Diploma of Nursing (B.Sc. Social Science)(European), students studying for the Diploma of Nursing Education (European and Bantu) and medical students (Non-European) at the University of Natal, and Public Health nursing students (Asiatic and Coloured) from the M.L. Sultan Technical College.

VII. IMMUNISATION

One of the many important functions of this Department continued to be the maintenance of an adequate immunisation state of the population at risk to prevent outbreaks or spread of infectious disease. Facilities, free of charge, are provided at Departmental Child Health clinics throughout the City for the immunisation of susceptible individuals against diphtheria, whooping cough and tetanus, poliomyelitis and vaccination against smallpox. In addition, a central immunisation clinic is conducted in this Department's buildings and at this venue a further function is that of inoculation of food handlers against typhoid and paratyphoid fever.

Parents are reminded of immunisation when their infants reach the age of three months by postcards despatched by this Department. Children of all races at nursery schools, places of care and primary schools are visited by the Department's school teams. Children under three years of age are given the triple antigen (diphtheria-whooping cough-tetanus) whereas combined diphtheria and tetanus vaccine is given to those over three and under 10 years of age. All such immunisation is subject to parental consent and prior checking of past immunisation records.

For school programmes, continued use was made of hydraulically-operated multi-dose jet injection instruments, the previous two machines having now been increased to four.

Further immunisation was carried out in the field from two purpose-designed mobile immunisation vans operating mainly in the outlying areas for the Non-White races, where clinic facilities are limited. In this way an efficient and systematic coverage of Indian and Bantu townships was provided.

Vaccination against Smallpox

Vaccination against smallpox continued at all child health clinics, in the field and at the request of many Non-European school principals for unvaccinated school children. Compared with 1969, requests have diminished due to the compulsory production of proof of vaccination before school entry.

The number of vaccinations carried out during 1970 is reflected in the following table:

Vaccinations	E	C	B	A	Total 1970	Total 1969
Primary Vaccinations	2 825	1 509	6 676	10 706	21 716	23 974
Re-vaccinations	209	86	7 890	895	9 080	20 246
Total	3 034	1 595	14 566	11 601	30 796	44 220

The large decrease in total re-vaccinations is accounted for by the fact that the 1969 figure was inflated by a mass vaccination campaign following the diagnosis of two cases of smallpox. For comparative purposes the 1968 figure was 3078.

In addition to the above, 65 741 Bantu work seekers were vaccinated against smallpox at the Bantu Administration Department, making a grand total of 96 537 vaccinations for the year. This figure does not include vaccinations performed by private medical practitioners, the Port Health Officer or the various other persons vaccinated for international travel, etc.

Combined Diphtheria, Whooping Cough and Tetanus Immunisation

This triple antigen was administered to children from three months to three years of age, mainly at the Child Health clinics, but also at places of care and nursery schools, as summarised below:

Age Group	DWT Dose	E	C	B	A	Total
Under 1 Year	1st	2 898	1 605	6 192	9 291	19 986
	2nd	2 782	1 393	3 984	8 305	16 464
	3rd	2 547	1 246	2 993	7 385	14 171
	Total	8 227	4 244	13 169	24 981	50 621
1-3 Years	1st	111	60	1 701	893	2 765
	2nd	113	75	1 384	855	2 427
	3rd	161	106	1 423	1 036	2 726
	Booster	1 900	1 124	1 244	5 374	9 642
	Total	2 285	1 365	5 752	8 158	17 560
Grand Total		10 512	5 609	18 921	33 139	68 181

The total for 1969 was 66 702

Combined Diphtheria and Tetanus Immunisation

Pre-school institutions, infant and primary schools were visited by two teams to immunise and give booster doses of vaccine to children below the age of 10 years. This combined antigen is also administered at clinics. Details are summarised as follows:-

Age Group	DT Dose	E	C	B	A	Total
Under 1 Year	1st	8	9	20	18	55
	2nd	20	9	5	18	52
	3rd	12	4	3	12	31
	Total	40	22	28	48	138
1 - 6 Years	1st	176	128	1 501	1 983	3 788
	2nd	116	104	1 037	1 470	2 727
	3rd	87	77	763	1 159	2 086
	Booster	1 764	1 336	1 066	5 742	9 908
	Total	2 143	1 645	4 367	10 354	18 509
School Age	1st	694	520	2 619	2 923	6 756
	2nd	514	465	2 458	2 832	6 269
	3rd	353	402	2 098	3 099	5 952
	Booster	2 535	1 725	641	5 146	10 047
	Total	4 096	3 112	7 816	14 000	29 024
Adult	1st	11	5	1	1	18
	2nd	3	3	1	-	7
	3rd	3	1	3	4	11
	Total	17	9	5	5	36
Grand	Total	6 296	4 788	12 216	24 407	47 707

The total for 1969 was 48 996

Tetanus Immunisation

Tetanus prophylactic vaccine was administered mainly to school children, as shown in the following table:

Age Group	Dose	E	C	B	A	Total
School Age	1st	8	3	-	2	13
	2nd	1	29	-	-	30
	3rd	9	47	-	17	73
	Booster	2 062	915	903	5 178	9 058
	Total	2 080	994	903	5 197	9 174
Adult	1st	17	-	13	6	36
	2nd	8	1	9	1	19
	3rd	10	1	96	8	115
	Booster	13	1	2	2	18
	Total	48	3	120	17	188
Grand	Total	2 128	997	1 023	5 214	9 362

The total for 1969 was 9 707

Immunisation against Poliomyelitis

Full details are given below:

Age Group	Dose	E	C	B	A	Total
Under 1 Year	1st	3 523	1 622	6 900	10 267	22 312
	2nd	3 296	1 415	4 304	8 827	17 842
	3rd	3 009	1 279	3 235	7 879	15 402
	Total	9 828	4 316	14 439	26 973	55 556
1 - 4 years	1st	297	146	4 552	2 584	7 579
	2nd	293	135	2 695	2 010	5 133
	3rd	351	169	2 283	2 263	5 066
	Total	941	450	9 530	6 857	17 778
5 - 9 years	1st	417	101	8 028	572	9 118
	2nd	311	69	8 210	519	9 109
	3rd	315	56	3 926	804	5 101
	Total	1 043	226	20 164	1 895	23 328
10 -19 years	1st	293	72	284	466	1 115
	2nd	157	45	809	1 283	2 294
	3rd	167	41	1 776	2 359	4 343
	Total	617	158	2 869	4 108	7 752
20 years and over	1st	1 035	35	848	648	2 566
	2nd	837	34	279	1 656	2 806
	3rd	678	51	193	3 483	4 405
	Total	2 550	120	1 320	5 787	9 777
Grand Total		14 979	5 270	48 322	45 620	114 191

Total for 1969 was 131 651

Typhoid Control

Clinics are held twice weekly throughout the year for Vi-tests to be performed on selected foodhandlers and for the administration of typhoid, paratyphoid A and B vaccine. The figures on the following page reflect all such injections given at clinics and in the field:-

Vi-tests	E	C	B	A	Total 1970	Total 1969
Blood Samples	2	1	833	28	864	741

No positive results were recorded

TAB Vaccine	E	C	B	A	Total
1st Dose	73	2	950	995	2 020
2nd Dose	40	-	820	937	1 797
3rd Dose	12	-	14	692	718
Boosters	9	-	598	87	694
Total	134	2	2 382	2 711	5 229

The above figures include those given to workers at the three sections of the sewerage works and to children and adults in the Newlands area where this is considered a necessary precaution in view of the lack of proper sewerage facilities and inadequate water supply in that area.

The total for 1969 was 2 040.

VIII. HEALTH EDUCATION

INTRODUCTION

Health education of the general public requires the constant participation of very nearly all officials in a health department. Only in this way can preventive and promotive work be satisfactorily furthered.

In addition, the Department's Health Education Section continued the routine daily programmes throughout the year and, where indicated, embarked on special projects. The methods used varied with the occasion and included films and talks, talks from the mobile health education unit, group talks and house-to-house visiting. Film material included both 16 mm films, 35 mm slides and film strips. Other visual aids employed were working models and charts.

The Section comprises a staff of 21, under the direction of a European male Health Educator, assisted by a European Health Visitor. Under their direction are a European Technician, two European General Assistants, one Coloured female lecturer, seven Bantu male and one Bantu female lecturers, one Asiatic female and six Asiatic male lecturers.

The extent of the work performed during the year and the subject areas covered are summarised separately as follows for the various racial groups:-

WHITE COMMUNITY

(a) European Schools

Five visits were made to four schools, at which various subjects were covered by 16 mm film shows followed by discussion. The subjects presented included problems of adolescence, baby care (both of which were for girls only), tuberculosis, the human body, and insect pests.

(b) Departmental Auditorium

(i) South African Railways and Harbours Apprentices

Three hundred new apprentices attended in two groups for a presentation of films and slides and participated in a discussion. Subjects covered were bilharzia, venereal disease, smoking, alcoholism, road safety, marijuana, and heavy machinery safety.

(ii) Social Clubs

On six occasions members of two municipal social clubs and their friends viewed films on the subjects of tuberculosis, smoking, alcoholism, drugs, nutrition and family planning.

(iii) Other Groups

A group of pharmacists and their wives viewed a programme of films on the drug problem. The films shown were the only ones available in the country at the time and were presented with a view to ascertaining their suitability for showing to general audiences.

A group of Rotarians and their friends were also shown the same films. After both presentations there followed a lively discussion.

A party of boys selected from high schools in Natal and who were attending the Annual Rotary Camp spent a day in the department to gain insight into the work of a city health department. They visited the milk laboratory, housing and plans section, immunisation and child health clinics, mobile X-Ray van, and viewed demonstrations of insect pests, and unsound foodstuffs and meat specimens. In addition, they viewed the slide presentation on the functions of this department and 16 mm films on road safety and drugs. The visit ended with a discussion period, a panel of officials of the department answering a wide range of questions.

Public Health and Preventive Medicine being included in the new syllabi for training of various categories of nursing, students, sister tutors and teaching staff from local hospitals were shown the slide presentation "The Silent Guardian" depicting the functions of the department. This was followed by a discussion period when a representative panel of officials answered questions on the public health responsibilities of a local authority. The session proved so successful that it was repeated for students studying for the Bachelor of Social Science (Nursing) degree at the University of Natal.

School clinic nurses were invited to view a film entitled "Its Wonderful being a Girl" (dealing with the problems of growing up) to ascertain its suitability for showing at girls' schools.

A group of mothers attending a child health clinic viewed a film on family planning, followed by a discussion led by the Health Visitor.

Matrons and nursing sisters from various hospitals in Natal, studying for the Diploma in Nursing in Pietermaritzburg, spent a morning in the section, and after a discussion on Health Education, supported by a demonstration of visual aids, visited lecturers in the field to see the practical application of techniques in a Bantu and an Indian township.

Members of the Commission of Inquiry into Drug Abuse visited the Department to see films dealing with the drug problem.

Members of the Institute of Water Pollution Control visited the auditorium on four occasions, for talks, slides and films dealing with waste water stabilisation, desalination of water, reclamation of sewage effluent, bilharzia in water supplies and the provision of a pure water supply.

Lectures supported by slides delivered by guest speakers and arranged by the National Building Research Institute, were given to members and staff of both the City Engineer's and Health Departments. The subjects included modern plumbing methods, timber-framed brick veneer housing and concrete floor construction.

(c) Other Venues

Student nurses at three training hospitals were visited on seven occasions when films were shown. The subjects covered included tuberculosis, bilharzia, rabies, insect pests, housefly, rodents, smoking, alcoholism, nutrition and drugs.

Two public institutions were visited; at one, films on drugs were presented, whilst at the other the same films as well as others on smoking and alcoholism were shown.

A programme of films and discussions on bilharzia and the house fly was arranged for a Church ladies group, whilst another group from the Women's Institute viewed a film on family planning in relation to the world population explosion.

A group of expectant mothers were visited on two occasions when films and talks on the subjects of ante-natal and child care were given.

Members and friends of the Marriage Guidance Council were visited and films on drugs shown, whilst the slide presentation depicting the functions of this department was taken to a group of social science students at the University.

A talk was delivered at the monthly meeting of an organisation representing management and industry on the subject of "Health Education in Relation to Labour."

During the National Convention of the South African Pest Control Association in Durban, papers were delivered by three members of the department on the subject of pest control. In addition, films on the house fly and cockroach were shown.

A group of Girl Guides studying for the home nursing badge were visited and given a talk on child and toddler care.

In addition to these specific groups, 323 talks were given at departmental mother and child health clinics to those mothers awaiting attention. The subjects ranged from family planning, child care and nutrition through safety in the home and mouth-to-mouth resuscitation to general hygiene. A follow-up of these talks and where considered necessary or where specifically requested, made for 176 home visits. At these, further discussion and advice in regard to family planning took place.

COLOURED COMMUNITY

For the first half of the year the post of Coloured Lecturer was vacant. In June a suitably qualified Coloured Nurse was appointed and the work amongst the Coloured community was satisfactorily resumed. The usual media of health education were adopted, i.e. film shows where possible, group talks and a good deal of tireless plodding from house to house.

The work is summarised as follows:-

(a) Film Shows

(i) Coloured Schools:- A total of three schools were visited on four occasions for nine film presentations on the subjects of the human body, nutrition, smoking, alcoholism, insect pests, the problems of growing up (girls only), disease and general and personal hygiene.

(ii) Adult Coloured Groups:- A total of four women's groups were visited and six films on subjects such as insect pests, nutrition, general hygiene and family planning were shown.

(b) Group Talks

Talks numbering 1 563 were given at five departmental clinics to waiting mothers. These clinics have proved to be ideal venues for health educational work, especially as these groups invariably need plenty of information and assistance and are receptive audiences. The subjects covered in this way were family planning, child care, nutrition and, where found necessary, personal hygiene and scabies.

(c) Domiciliary Visits

Having met mothers in the clinics, the lecturer also made 1 714 follow-up home visits, the subjects discussed being those covered previously, but with special emphasis on family planning which, for socio-economic reasons, is of such vital importance to this community.

BANTU COMMUNITY

Work amongst this community was again pursued and received with enthusiasm, and daily programmes throughout the year were continued. The methods used were film shows followed by talks, all films being presented by a lecturer in the Zulu medium, talks from the loudspeaker van, group talks, for example, in the streets, locations and at places of work, and by house -to-house visiting. For the latter the main topics were polio-myelitis and family planning where a more personal contact is preferable.

(a) Film Shows(i) Bantu Schools:-

A total of 22 primary schools were visited for 82 presentations of two films, six being on tuberculosis, the remaining 76 being devoted to an extremely good film about two families, one of which lives healthily, wisely and happily and the other quite the opposite. Of interest was the excellent reception by the scholars and the appreciation of principals and teachers.

(ii) Factories:-

At 10 factories, 26 film presentations were given on the subjects of venereal disease, general hygiene and tuberculosis. In accordance with established practice, all film shows were followed by question time and were shown during the lunch hours. The experience of this department's

educators is that this is a most acceptable time for health films, whereas in at least one other large city this has proved to be unacceptable to the workers and unsatisfactory to the educator.

(iii) Other Groups:-

Films on the subjects of family planning, venereal disease, general hygiene, tuberculosis, nutrition and insect pests were shown to groups from Lamontville Township, the S.J. Smith Hostel and at a departmental clinic. In addition, the slides (with commentary) on the functions of this Department were shown to a group of Bantu Social Science (Nursing) students and to Bantu nurses studying for the Diploma in Nursing Education. A total of 135 film presentations were given.

(b) Talks from Loudspeaker Van

This method of dissemination of health education continued to be a popular and effective medium in the townships. It has the advantage that the inhabitants can listen from their own doorsteps, and at the same time large numbers can be reached. In this way a total of 833 talks were given in the townships, locations, hostels and in industrial areas. The varied subjects covered included venereal disease, tuberculosis, poliomyelitis, nutrition, immunisation, litter and refuse hygiene and general and personal hygiene.

(c) Group Talks

Group talks formed the major part of the programme. This is easily understandable as the lecturers readily collect little groups of listeners and the Bantu as a community is attracted to such groups. Even if they come along only out of curiosity they remain to acquire knowledge. These talks were given in townships, locations, hostels, beerhalls and eatinghouses, clinics, in fact anywhere where groups of Bantu could be gathered. The range of subjects was wide, covering a broad field of public health problems, and included the ever important topics of venereal disease, tuberculosis, nutrition, food handling hygiene, family planning and child care.

One lecturer regularly attended the Bantu Administration Department to address groups of work seekers, many of whom had come to Durban for

the first time from the rural areas. As these talks, which fall on virgin health education ground, are an important facet of the programme in the Bantu community, the subjects covered a whole gamut of health matters.

In all, 13 934 group talks were given during the year.

(d) Domiciliary Visits

Lecturers continued to support the anti-poliomyelitis campaign in the housing schemes by house-to-house visiting and checking on the immunisation state of the children. House visiting was also carried out to cover such subjects as venereal disease, child care and family planning. A total of 490 such visits were made.

(e) Special Assignments

(i) During S.A.N.T.A. Week held in Durban under the auspices of the South African National Tuberculosis Association, this section again assisted. The propaganda this time was directed to the Bantu community.

A total of 39 schools were visited, lectures being given to every class and competitions organised. These competitions, which take the form of essays for the higher primary, secondary and high schools, and "colouring in" of pamphlets for the lower primary classes, attracted 654 entries in the former section and 1 586 in the latter. Cash prizes, donated by S.A.N.T.A., were presented to the winners in the presence of their principals and schools by the Health Educator and Senior Bantu Lecturer. The content of the essays proved that much of the health education disseminated had indeed made an impact on the children.

(ii) Infant Survey in kwaMashu

The aim of this survey was to determine the extent of the infant population and their immunisation state following the relatively high incidence of poliomyelitis during 1969 when of 22 proven poliomyelitis cases in Durban 17 were Bantu, 9 of whom were infants under the age of one year who had not been fully immunised. All births notified to this Department in June and December 1969 were noted and lecturers then sent out to

trace the babies concerned at the addresses given on the notifications. Those born in June, being now 10-11 months old, should have completed their immunisation programme against poliomyelitis and smallpox, whilst those born in December, being 4-5 months old, should have been vaccinated and received one or two doses of oral poliomyelitis vaccine.

The results of the survey are as follows, all information being obtained from parents or relatives:

(a) Babies Born in June 1969 - (10-11 months old)

No. of Births Notified	Traced at Given Address	Left for Farms or Kraals	Not Known at Given Address	House Locked at time of Visit- No information	Family moved to address unknown	Died
447	140 31,32%	145 32,44%	53 11,86%	67 14,99%	13 2,90%	29 6,49%

Of the 140 babies traced, 100 were stated to be attending clinic, whilst 40 had not attended at all. The state of immunisation of those traced was given as:-

Poliomyelitis - 1st dose - 25
2nd dose - 21
3rd dose - 59

Smallpox vaccination 107*

This information was confirmed by examination of the arm.

Of the 145 known to have left for the kraals, 64 left immediately after the birth as their mothers had only come to Durban for the confinement and were not bona fide residents at the time.

(b) Babies Born in December 1969 (4-5 months old)

No. of Births Notified	Traced at Given Address	Left for Farms or Kraals	Not Known at Given Address	House Locked at time of Visit- No information	Family Moved to address unknown	Died
436	168 38,53%	120 27,52%	67 15,37%	54 12,39%	13 2,98%	14 3,21%

Of the 168 traced, 127 were stated to be attending clinic whilst 41 were not. The state of immunisation

amongst the 168 was:

Poliomyelitis	1st dose	-	87
	2nd dose	-	9
Smallpox Vaccination		-	71

Of the 120 who had left for the kraals, 51 were stated to have left with the mother immediately after birth and were definitely not bona fide residents.

Comments:

With regard to the locked houses, neither parents nor babies were found and no information could be obtained from the neighbours except that the inhabitants were working and that in some cases no babies were known to be present at the address.

Where babies were not known at the address given on the notification, it was found that the mothers were also unknown, this information being obtained from the occupiers who had been in residence long before June 1969.

In cases where families had moved to an unknown address, some were thought to be in kwaMashu or other townships in Durban, whilst a few were thought to have moved to Umlazi Township.

The reasons advanced by some mothers whose babies were not attending clinic included "couldn't be bothered", "feeling sick", "too busy selling beer", and were not very convincing, whilst other mothers were working and their reason for non-attendance was obviously genuine. Only in about three cases of those interviewed was there any real resistance to clinic attendance and this was allegedly brought about by a feeling of "ill treatment" at a previous visit. By "ill treatment" full enquiry showed this to mean a query by someone at the clinic or "harsh words" because of failure to present for immunisation at the correct time or similar omission.

It is considered that an organised intensive poliomyelitis campaign in the townships may result in immunisation of some of those at present not attending, but if visits to clinic are left to the individual it seems an efficient coverage will never be effected. Even with house-to-house visits the data suggests that 100% coverage cannot be attained.

ASIATIC COMMUNITY

Health Education amongst this group was continuously pursued as before. With the growth of Chatsworth, however, the majority of the work was carried out in this township where persons were re-settled from all areas of Durban. Some families had been moved from slum or near-slum conditions to their new houses and it was found that much health education was necessary, both initially and continuously, the best method being by house-to-house visits. Whilst rehousing and health education at Chatsworth carried on apace, other areas of Durban were not forgotten by the educators. Thus health education was disseminated in, for example, Umhlatuzana, Welbedacht, Kharwastan, Springfield, Merebank, Clairwood, Sydenham, Clare Estate, Sea Cow Lake, Greenwood Park, Newlands and Overport.

Apart from house-to-house visits, film shows were presented, talks given from the loudspeaker van and group talks organised.

(a) Film Shows

Both 16 mm films and 35 mm film strips followed by talks were presented at schools, to adult groups and to special groups, details being as follows:

(i) Schools

At 29 schools in Chatsworth and Merebank 72 film presentations were given, dealing with nutrition, pulmonary tuberculosis, cleanliness, insect pests and smoking.

During four visits to Springfield Training College, students were shown the slide presentation of the functions of this Department and other films covering the house fly, rabies, bilharzia and tuberculosis.

(ii) Adult Asiatic Groups

Six women's groups were shown 15 different films which included the subjects of tuberculosis, family planning, and general cleanliness.

(iii) Special Groups

A group of Social Science students from the University were shown films on family planning, tuberculosis, nutrition and the house fly.

(b) Talks from Loudspeaker Van

This method of health education is gradually becoming a more popular medium in the Asiatic community but remained comparatively less acceptable, and hence was used only where specifically indicated. For example, as proof of smallpox vaccination and immunisation against poliomyelitis must be produced for children entering school for the first time, this requirement and the subject of immunisation and its importance was broadcast in all areas at the beginning of the year, a total of 1 013 talks being delivered.

(c) Group Talks

This proved to be a popular medium for health education in the Chatsworth area. Groups were constituted by gathering people together at random by loudspeaker announcements or were officially pre-arranged with some specific group. A measure of the success of this method is that of the total of 1 111 group talks given to the Asiatic community, 920 were to groups in Chatsworth. Subjects covered were varied and included family planning, tuberculosis and general hygiene.

(d) Domiciliary Visits

House-to-house visiting has proved to be the most popular of all methods and is probably the best and most successful in this community. There is invariably a large family or an extended family unit in each dwelling, so that numbers of people are reached in this way.

By meeting families on a house-to-house basis, any specific problem pertaining to a particular family could be handled and the talks given covered a variety of subjects including general hygiene, poliomyelitis, general immunisation, and family planning. The latter topic, in particular, was assiduously pursued but doubts were expressed by the lecturers from time to time as to how much knowledge was being absorbed. Experience, in fact, showed that such talks required repeated and intermittent repetition. A total of 27 501 home visits were made in all.

GENERAL

(i) Several newly available films of public health educational value were previewed with a view to purchase, but nothing suitable was found.

(ii) Staff members viewed films on air pollution, drugs, cancer, and refuse collection using paper sacks and plastic bags.

(iii) Fifth year Non-European medical students visited the department to view the slides on the activities of the department, and films on rodents, the house fly, alcoholism and L.S.D. A demonstration and talk on insect pests was given and they also visited the milk laboratory.

(iv) A Medical Officer of Health from Rhodesia visited the Department and was shown visual aids and methods used, and viewed practical work in the field.

IX. HEALTH INSPECTIONCOMPLAINTS

The Department received 4 534 (3 960) complaints during the year which are analysed as follows:-

Animal Keeping	5	Offensive Smells	226
Bugs	67	Poultry Keeping	77
Cockroaches	45	Refuse Dumping	304
Conservancy Services	25	Refuse Removals	43
Drainage -		Rodents	531
Appurtenances	40	Sanitary	
Defects	463	Accommodation	59
Flies	323	Shacks (Illegal)	9
Fleas	12	Smoke/Air Pollution	13
Food -		Structural Defects	166
Unhygienic		Uncleanliness of	
Handling	73	Premises	461
Unsound	45	Vacant Land	596
Housing -		Ventilation	5
Illegal	23		
Overcrowding	38		
Miscellaneous	112		
Mosquitoes	773		

All these reported nuisances were promptly investigated and appropriate action taken.

INSPECTIONS

Visits carried out to all classes of premises by the Health Inspectorate and ancillary personnel are summarised hereunder:-

<u>Food-handling Premises</u>		<u>Other Premises</u>	
Bakeries	458	Barracks/Compounds	556
Boarding Houses/ Private Hotels	1 037	Dwellings	90 803
Butcheries	4 097	General Dealers	7 258
Dairies (mainly ex-City and Depots)	3 639	Hairdressers	871
Food Manufactories	844	Laundries/Dry Cleaners and Depots	860
General/Fresh Produce Dealers	13 623	Lodging Houses/ Flats	11 629
Hotels (liquor licensed)	1 183	Offensive Trades	728
Milk Bars	92	Sundry -	
Offensive Trades	100	Trading	12 718
Restaurants/ Eating Houses	7 119	Non-Trading	38 704
Tea Rooms	2 948		
Sundry	2 925		

Arising from these inspections, which totalled 202 192 (216 879) the following action was taken:-

Personal notices issued at time of inspection	16 721
Statutory notices served	3 411
Letters written	1 411
Prosecutions instituted (counts)	286

LICENSING/REGISTRATION(a) Trade Licence Applications

Reports on public health implications, respecting the state of premises and trades to be conducted therein, were submitted in connection with 3 105 new applications lodged with the City Licensing Officer. In certain instances there were departmental requirements or by-law

shortcomings to be complied with requiring re-inspection in due course. As a result, 843 "further reports" were submitted.

(b) Bantu Licence Applications (Housing)

During the current year, the Director of Bantu Administration referred 12 applications for permission to house Bantu non-domestics, in terms of the Regulations under the Bantu (Urban Areas) Consolidation Act No. 25 of 1945. If the conditions were satisfactory, favourable reports were made.

(c) Animal Keepers

Thirty one permits for the keeping of animals were issued in terms of the Public Health By-laws, 26 being renewals and five being new permits. The total number of animals registered was:

Bovines	8	Goats	46
Sheep	4	Equines	603
Pigs	500	Dogs in Kennels	274 (kept for reward)

(d) Food Vending Vehicles/Machines

Registration under the Food By-laws was granted for the following:

Mobile soft dairy mix dispensers	12
Perishable food vending machines	7
Food conveyance vehicles	995
Hawkers' and pedlars' carts	90

(e) Modification of Food By-law Requirements

In accordance with powers contained in the Food By-laws, the City Medical Officer of Health granted 27 certificates authorising the relaxation of minimum requirements mainly respecting storage areas (25).

(f) Dry-cleaners'/Laundry Vehicles

The Department approved the suitability of 47 vans during the year.

(g) Mattress-makers and Upholsterers

Forty three certificates of registration were issued in terms of the regulations framed under the Public Health Act of which eight were in connection with new businesses.

(h) Offensive Trades

The number of trades registered during the year amounted to 119 of which 69 were operating under unlimited time periods and 60 were for a restricted term. The latter figure included 11 new applications in the following categories:

Asbestos Works	1
Chemical Works	5
Cement Works	2
Paint Works	1
Soap and Candle Works	2

The number of offensive trades operating during 1970 is slightly less than in 1969, 15 having closed down for various reasons.

ENVIRONMENTAL SANITATIONPantechnicon Park - Somtseu Road

With the conclusion of a lease of the abovementioned Municipal premises, the overnight parking site for long-distance haulers came into full function in July 1970. It is earnestly hoped that this commercial venture will go a long way towards curtailing the most unsatisfactory practice of parking out-of-City pantechnicons and heavy duty vehicles on vacant sites and roadways throughout the City and in various car-parking areas near the beach where essential amenities were not available for the crews.

Circus Site - Jelf Taylor Road

Conditions during the July season were generally satisfactory, but arrangements are in hand to improve conveniences for the public and to ensure better control of cleanliness on the site. The Department's advocacy of toilet and ablution facilities permanently connected to the sewer with removable superstructures when not required has shown a demonstrable improvement over the old system of night-soil pails.

Air Conditioning - Cinemas

A survey was carried out at all cinemas during the summer of 1969/70 to check the compliance of the mechanical ventilation of air conditioning with the new By-law performance standards. In the majority of cases the

functioning was considered adequate but repairs or improvements were required in respect of certain Non-White cinemas.

Bantu Beer Hall - Victoria Street

These Municipal premises, which were vacated at the end of 1969, remained vacant for some time and constituted the source of considerable trouble to the Department as a result of continued misuse by vagrants. In July permission was obtained by private enterprise for the use of portion of these premises. The arrangement did not prove at all satisfactory and the agreement had to be terminated. The building was finally demolished in November, thus removing a relic of the past which had long outgrown its suitability from the public health viewpoint.

Rugby Stadium

Complaints were received regarding the provision of temporary toilets to supplement the permanent accommodation for the very large crowds that patronise representative matches. Some time ago the matter was taken up with the organisers with a view to temporary sewer connections being made as a more modern alternative arrangement. Unfortunately these intentions were not realised and the bucket system was again employed with consequent justifiable complaints. It is the intention to intensify efforts to have the public sanitation at this large stadium improved to acceptable standards, particularly for the convenience of female spectators, before the next test series.

Licence Objections

Objections to licence renewals for 1970 included those lodged with the licensing authority in respect of 13 "temporary" shops at the Wentworth Government Village for Coloureds where conditions were unsatisfactory from the public health viewpoint. Representations had been made for years to the State Department concerned to make proper provision for trading at the Village and, on receipt of further assurances that new shops would be provided by mid-1971, objection to granting of licences was waived.

Offensive Trades

The management of a chemical works manufacturing wood preservative was called upon to effect substantial improvements to the plant and handling techniques in order to reduce a dust hazard in the works area arising from the handling of toxic chemicals. However, the firm preferred to import the chemicals in granular form thus eliminating the health hazard to employees.

SEWAGE WORKS

The Central Sewage Works which came into operation during the latter part of 1969 to replace the Old Point Sewage Works, received a setback when a serious explosion occurred on the 8th May, 1970, causing considerable damage to the sludge reactor and nearby plant. This resulted in the section of the works concerned becoming inoperative and all sewage (approximately 20 million gallons per day) by-passing directly into the three mile long undersea pipeline for ejectment at a depth of 250 feet on the ocean bed. This effluent obviously could not be subjected to any treatment other than maceration so regular checks were carried out along the beach surf zones to ensure that no public health nuisance occurred. Visible pollution was not observed.

Repair work on the damaged sludge reactor and plant was completed during August, but re-commissioning was delayed for a number of reasons with the result that by the year end the plant was still inoperative, the lower section of the reactor now having to be re-designed for additional security. Resumption of operation is expected by mid-April 1971.

TARA ROAD REFUSE TIP

Dumping of household refuse was resumed at this tip site in August 1970, in order to raise the level of certain sections, but by the beginning of summer this Department received many fly complaints from residents in the nearby area. Breeding in the tip site was aggravated by heavy rains and fly control measures became extremely difficult. Following negotiations with the City Engineer the tip site was closed to the dumping of refuse, other than garden waste, when the situation improved.

POLLUTION

A number of reports of water pollution were investigated and typical incidents are referred to below:

Following a report of fish mortality in the "Mullet" stream which flows into the harbour, a check was made of this waterway and the perimeter of the Bay in the vicinity. Inspections were also made of factory premises in the area in an effort to establish the cause. No pollution was evident at the time of the inspection and live fish were evident in the "Mullet" stream. A report of fuel oil contamination of the stream from a nearby wholesale fishmonger (leaking storage tank) was also investigated, but this could not be confirmed as the cause of pollution.

Investigation of a press report of Bay pollution disclosed that a road tanker had overturned at Island View and accidentally discharged crude oil into the stormwater drain which empties into the nearby harbour. Remedial measures were instituted and no evidence of fish mortality was observed.

Pollution, detrimental to marine life in the surf, near the Umlaas Canal, was traced to an inadvertent discharge of waste by a local oil refinery. The matter was taken up with the management and there has been no recurrence of the nuisance.

ILLEGAL CAMPING

During the holiday seasons complaints and reports were received of the parking of caravans, erection of tents and sleeping in motor cars in public places near the beaches. There being no cooking facilities, ablution blocks or sufficient toilets the nuisances which arose can be well imagined. The offenders were referred to the City Police for action but it was held that the local authority's legal powers were inadequate to deal with the problem. Amendment of the General By-laws to prohibit, without written permission, camping or sleeping in motor cars at any public place not set aside for the purpose, was mooted.

ILLEGAL DUMPING

It is disappointing to record that in certain suburbs residents improperly dispose of their non-domestic refuse by depositing it on any convenient plot of land or on a road verge. Also, some commercial and industrial concerns do this as well, leading not only to unsightly conditions but also to nuisances. Any who could be identified with this practice were charged with a breach of the General By-laws and in fact 16 prosecutions were concluded in 1970, R490 in fines being levied.

SEWER SURCHARGES

Due to shortcomings in the sewerage reticulation or inadequacies in the trunk mains, and in some instances vandalism, local blockages occurred with surcharging at manholes and so giving rise to objectionable conditions.

These occurrences were fairly widely distributed in the sewered districts and there appears to be little hope of overflows being eliminated completely until the Council's programme of improving sewerage throughout the City is more advanced.

FOOD HYGIENE

Food Inspection

In terms of the Regulations relating to Food Inspection framed under the Public Health Act, large quantities of food were inspected and seized by the Health Inspectorate or voluntarily surrendered by the owners.

Daily inspections of produce arriving at the City Market, requests by wholesalers and retailers for examination of suspect foodstuffs on their premises, the routine inspection of stocks in shops, and complaints by the public resulted in the condemnation and destruction of the following unsound foodstuffs over the year:

City Markets

5 018 bags and pockets	Cabbages, potatoes, cucumbers, green peppers, green beans, carrots, onions, green peas, butter beans, garlic, bringals, chillies, dried peas, oranges, cauliflowers, broad beans, Brussel's sprouts, hubbard squash and marrows.
3 524 trays, boxes and crates	Tomatoes, peaches, green peppers, apricots, paw paws, cauliflowers, lettuce, pears, marrows, mandarins, Cape gooseberries and plums.

Also detained and destroyed were 32 dressed ducks, 20 dressed fowls and one guinea fowl.

Other Traders

64 090 tins, bottles and jars	:	Fish, meat, jam, fruit, vegetables, etc.
4 456 packets, cartons, and boxes	:	Yeast, cereal, spices, sweets and nuts. :
5 953 packets	:	Frozen fish, meat, vegetables, etc.

Other commodities included 812 kg cheese, 425 lbs salted snoek, 341 frozen chickens, 10 polonies, 96 lbs dates, 36 lbs walnuts, 75 crates lettuce and 200 lbs sugar.

Weekend refrigeration breakdowns in supermarkets accounted for the condemnation of the majority of the frozen commodities, while in the case of tins, bottles and jars these were either blown, rusted, leaking or broken.

Weevil infestation and rodent contamination were the reasons for condemnation of such goods as nuts, cereals, spices, dates and sugar. Fly maggot infestation of salted snoek also occurred.

Bacteriological Examinations

The Food By-laws require that ready-to-eat foodstuffs comply with certain bacteriological standards and, accordingly, regular sampling of these commodities was carried out. During the year 146 samples were purchased from food factories or retail premises in the City and examined in the Department's laboratory. Foodstuffs purchased included vacuum-packed prepared meats, sandwiches, hamburgers, hot dogs, meat balls, cooked sausages, cooked meat and cooked chicken portions, fish cakes, fried fish, and cream cakes. Whenever undesirable contaminants were found, the licensees were warned to pay special attention to food hygiene. In due course further samples were taken from the same sources and submitted to the Council's Consultant Pathologist for formal examination in terms of the By-laws. Legal proceedings were then instituted in the ten instances where samples were proved to be in conflict with By-law standards.

Food Surveys

Of necessity in this climate, considerable attention was again devoted to the need for a high standard of hygiene in food premises. Once again, a planned survey of all establishments where food was manufactured

or prepared was carried out over the 12-month period. The following table summarises the work undertaken:

Establishment	Premises	Inspections	Notices Served
Butcheries	265	2 375	538
Restaurants	432	3 547	836
Liquor Licensed	117	831	247
Food Factories	91	689	185
Boarding Houses, etc.	183	943	165
Total	1 088	8 385	1 971

Early morning and evening inspections of food establishments and deliveries after normal working hours were routinely carried out by the inspectorate.

Meat Vehicles

Section 20(d) of the Food By-laws, promulgated in 1968, required that all meat being conveyed for sale in the City must be conveyed in a purpose-designed, enclosed vehicle so fitted that all carcasses or parts thereof would hang from stainless steel hooks fitted at such a height that the meat would be clear of the floor of the vehicle.

Largely due to action taken by the Government's Chief Meat Hygiene Officer under State legislation the situation has now been attained whereby all meat vehicles used for conveying meat from the Durban Abattoir to butcheries and other premises in the City where it is to be sold comply with these requirements.

Open vehicles transporting meat partially covered with unsightly and often dirty tarpaulins are at long last only a memory of the past and the policy advocated by this Department for so many years has been vindicated.

Public Gatherings

Most notable events involving large public gatherings were the Australian Cricket Test and Provincial matches, the Durban July Handicap and Gold Cup horse racing events, the South African Open Golf Championships, the Natal Open Tennis Tournament, Virginia Air Display, and "Durban Stampede" at Hoy Park. At these functions vast

quantities of food were consumed and, to illustrate the magnitude of the problem concerned, over the four days of the Cricket Test at Kingsmead an estimated 65 000 people disposed of 23 660 hot dogs, 20 400 pies, 7 200 hamburgers, 2 400 sandwiches and 1 000 light meals. In view of the food poisoning risks associated with functions of this nature, health officials were on duty daily, checking on food hygiene and sanitation. Nothing untoward was found.

Illegal Vending

The selling of meat, offal, cooked food and the like continued to be a problem, particularly in certain areas such as the vicinity of the Dalton Road footbridge and near Old Dutch Road. The Bantu sellers display their wares without any protection from contamination and decamp at the first sign of officialdom only to resume operations when the "coast is clear." The site of operations is invariably littered with refuse making it continually necessary to adopt anti-pest measures. Various solutions have been examined with the collaboration of other affected authorities without any lasting remedy being found. All instances noticed were reported to the licensing and police authorities.

Food Premises

The Health Inspectorate maintained the active tempo of routine inspectional programmes and called for implementation of remedial measures as necessary. The following examples demonstrate the variety of problems that were overcome.

Substantial improvements were carried out to the canteen of a large factory at Jacobs, involving the replacement of sub-standard equipment and increasing kitchen/food preparation area by 46.5 m². A new servery/kiosk was erected for the Non-Europeans.

The South Coast Beerhall was officially closed by the Bantu Administration Department at the end of the year. It was a matter of considerable relief as these premises had reached a stage where they ceased to be hygienically adequate for use as a beer hall, eating house, butcher shops and general dealers.

A food shop in Quarry Road was inspected to check upon the keeping of live poultry, but in view of the proprietor's threatening attitude a joint inspection was subsequently made by two officials when the premises were found to be in a filthy condition and rodent-infested. Accordingly, a prosecution was instituted for a contravention of the Food By-laws and in due course the accused was convicted. However, at the time of an inspection the Health Inspector was abused and assaulted by the proprietor and his wife and, following the laying of a charge, the accused were found guilty and fined on this account also.

Indian Market

For several years past it has been reported to the City Council that the public health circumstances generally were most unsatisfactory. Constant vigilance has been maintained in an attempt to achieve a degree of hygiene and cleanliness of the stalls without much success. The greatest single factor was the congestion of stalls in the building and one of the feasible ways of reducing the problem was to prevent the re-letting of stalls. During the year the Indian Market By-laws were amended to clarify the position of tenancy on the death of a stallholder, and under the revised conditions an estate may only remain in occupation for a period not exceeding 60 days. This measure had the effect of reducing the number of occupied stalls by 21 during the year.

An attempt was made to control refuse in the vicinity by the provision of a collecting area, but conditions still remained far from satisfactory.

Beach Catering

Following past practice regular checks were kept on food preparation, handling and service of food and drink to the public in the catering establishments, on the beaches and in cars. No unsatisfactory incidents were reported during the peak holiday periods or at any other time.

Facilities on the main beach improved with the completion of a new restaurant complex in the Aquarium on the site of the old "Model Dairy". Replanning of the beach front also resulted in the closure of the Coe-ee Tea Room, a cause of concern to the Department for many years.

Food-Handling Trends Elsewhere

Through the courtesy of the Medical Officer of Health of Johannesburg, the Senior Health Inspector (Food Hygiene) paid a most informative visit to that city from 8th to 11th June when inspections of food manufactories, markets, hospitals, bakeries and eating houses were undertaken. Of particular interest was a high-level revolving

restaurant, and those restaurants and hotel kitchens sited below ground level. A study was made of the lighting, ventilation, fume extraction and waste drainage of these.

Following a previous visit and technical correspondence over several years the Food Hygiene Inspector attended a meeting of the South African Bureau of Standards Sub-Committee in Pretoria on 15th October, for the final drafting of a proposed specification for the microbiological requirements for packaged meat products.

BUILDING CONTROL

Plans:

A total of 1 256 plans for new development and major alterations and additions to premises, other than in respect of living accommodation, were referred by the City Engineer for scrutiny and approval from the public health aspect. Many plans needed reports indicating adaptation to meet departmental requirements and these in turn led to many discussions with owners and architects. Particularly large projects often warranted ad hoc meetings between the principals and the municipal departments concerned to resolve problems of ventilation and lighting.

Development arising from these plans fell into the following main categories:

New Commercial/Industrial Buildings	146
New State/Municipal Buildings	13
Other new buildings	13
Alterations (excluding housing and State/Municipal premises)	1 046
Alteration to Public premises	38
	<hr/>
	1 256
	<hr/>

Relaxation of Standards:

In terms of Section 127 of the Building By-laws the City Engineer may consent to a relaxation of Sections 126 and 129 (natural ventilation and windows standards) to such extent as he deems fit in respect of any building or portion thereof, other than -

- (a) a dwelling; or
- (b) private living accommodation in a residential building.

However, no such consent shall be given in respect of any portion of a building without windows or openable windows other than -

- (a) a shop, storeroom or garage below ground level;
- (b) a bathroom or water closet in an hotel; or
- (c) where he is satisfied that the said requirements (Sections 126 and 129) would adversely affect therein -
 - (i) a process;
 - (ii) its functional use; or
 - (iii) the operation of any equipment.

Naturally the City Engineer exercises his discretion in liaison with the City Health Department and during the year ten applications were considered of which nine were found to be acceptable from the public health standpoint.

Building By-Laws Liaison

The Department continued its membership of the Committee which met monthly under the chairmanship of the City Engineer and which is representative of departmental interests. Organisations which have permanent members are the Natal Provincial Institute of Architects, the Master Builders' Association and the National Building Research Institute (Natal Region) of the C.S.I.R.

Many matters were dealt with during the course of 1970 and standards adopted or revised included the protection of stairs in buildings; full-height partitioning of shops and offices; installation of lifts in residential buildings; central city "scheduled" arcades; and ceiling height in bathrooms.

PEST CONTROL

The "specialised" Field Hygiene unit of the Health Inspectorate comprised 119 persons under the direction of a Senior Health Inspector, viz:

Supervisor	1
Senior General Assistant	1
General Assistant	7
Overseer (Indian and Bantu)	2
Spotter (2 Indian, 10 Bantu)	12
Labourer (12 Indian, 84 Bantu)	96

This section of the Department is deployed mainly on insect pest control including bush clearing, ditching and spraying measures against mosquitoes, flies, cockroaches and bed bugs. In addition, seven General Assistants and five Assistants (Indian) are engaged exclusively on rodent control and anti-plague measures.

Unfortunately the turnover rate of European staff was fairly high due to enhanced circumstances offering elsewhere.

Mosquitoes:(a) Complaints

During the year, 773 complaints were investigated, An analysis of breeding foci is shown below:

Miscellaneous containers	429	(334)
Obstructed stormwater drains	33	(26)
Other drains and sub-floor areas	32	(69)
Defective septic tanks/ soakpits	51	(61)
Buildings under construction	76	(28)
Natural swamps	34	(27)
Sanitary fitments	30	(15)
Undetermined	41	(66)
Unsubstantiated	47	(62)
	<hr/> 773	<hr/> (688)

A number of complaints arose from sewage effluent which stagnated on open ground following overflows from blocked sewers. Many such instances were the direct result of irresponsible persons forcing large stones into sewer manholes. This was particularly noticeable in

some Non-European housing areas. The resultant conditions favoured the development of *Culex fatigans*. The treatment of sewer effluents with an organophosphate larvacide did not always give the desired result and, in many instances, an application of a high-spreading oil was necessary to eliminate the mosquito breeding. In a case of prolific adult mosquito infestation, however, very effective control was obtained by using pyrethrum insecticide in a thermal fogging machine.

Problems arose in locating the source of heavy mosquito infestation in densely overgrown low-lying terrain. Several such foci were the cause of mosquito complaints, particularly during the wet season. Here again the use of a thermal fogging machine proved an invaluable anti-adult mosquito control measure until a larvicide could be applied to the actual breeding source.

(b) Biological Control

Permanent swamp areas and sewage ponds continued to be stocked with tilapia fish to maintain the very successful control of mosquito breeding. However, one problem encountered, particularly during the current year, was the pollution of lakes and swamp waters with sewage and factory effluents. The resultant oxygen demand and absorption caused heavy mortality amongst the larger fish. Fortunately the majority of the small fry survived thus affording a measure of protection against prolific mosquito development.

All sewage previously passed through the Chatsworth stabilisation ponds was diverted to the Southern Sewerage Works. Prior to the drying-out of these ponds, netting operations were undertaken by this Department to reduce nuisances arising from accumulations of dead fish. A total of 117 045 lbs. of fish was destroyed. It is of interest to note that very many barbel were removed, several weighing 40 - 50 lbs. each.

Routine culling of Tilapia at the sewage maturation ponds at kwaMashu was continued to prevent overstocking.

(c) Anti-Malarial Precautions

The ever present possibility of malaria recurring in Durban was emphasised when the malaria vector, *A. gambiae*, was tentatively identified amongst the 3 031 Anopheline larvae collected during the year. It



SPOTTER COLLECTING MOSQUITO LARVAE

was the first to have been found in Durban for many years. Immediate adult and larval control measures were taken in the area but in spite of intensive investigations by a trained staff of 10 Bantu and three Indian spotters no further vectors were located.

Other methods of mosquito control included ditching to provide drainage of town lands, clearance of stormwater furrows, swamps and so on. During the year a total 543 759 linear yards of such drains were provided or maintained in comparison with 529 343 yards in 1969. In all 1 857 gallons of larvicide was used.

Flies:

The number of complaints received and investigated amounted to 323 and the sources of nuisance were:-

Garden cuttings and compost heaps	65	(64)
Refuse receptacles	41	(43)
Poultry keeping	38	(22)
Refuse dumped on vacant land	18	(17)
Manure/Stables	18	(10)
Sports fields	-	(5)
Miscellaneous conditions	75	(43)
Undetermined	24	(25)
Unsubstantiated	44	(30)
	<hr/> 323	<hr/> (259)

An organophosphorus treated fly bait was used most successfully in the control of fly nuisances. In cases of prolific infestation the added use of a "knock down" insecticide used in a thermal fogging machine resulted in excellent "kills" provided it was frequently repeated.

Rodents:

(a) Complaints

During the year 531 complaints were investigated and appropriate action taken.

(b) Control of Harbour Areas

The possibility of plague occurring in Durban

was kept in mind and the joint anti-rodent campaign with the Port Health authorities was maintained in the harbour and contiguous areas. This Department used 3 726 lbs. of dry poison and 34 gallons of diluted liquid poison. Of 1 525 rodent carcasses recovered, 85 rodents were submitted for plague indexing.

(c) Anti-Rodent Measures

The Lamont Bantu Village, housing some 30 000 persons, was again "gassed" and although several complaints of this pest were received, it was found that the degree of rodent infestation was far less than in the preceding year. This was undoubtedly due to the stricter control measures adopted by the Bantu Administration Department towards ensuring a cleanly condition of yard areas.

A number of reports were received of beach areas being rat infested and some of these followed the seasonal influx of illegal campers. Whenever such intimations proved correct, remedial measures soon brought the position under control.

Blood anti-coagulant poisons remained the choice for controlling most rodent infestations and no resistance to this form of rodenticide was noted within the City area. It was found, however, that certain brands of this poison appeared to be more effective than others but this was due probably to rodents in some areas preferring the different flavours.

Reasonable success was achieved from the experimental use of Warfarin impregnated wax baits positioned in drains and similar situations. When the quality of this form of poison is improved by the manufacturers it is probable that another useful weapon will be added to the Department's anti-rodent armamentarium.

Bush Clearing:

The Department undertook a big bush clearing programme in which over 565 acres of vacant land or premises were cleared of grass, rank weeds and other vegetation excluding trees. During the peak period, February through to April, it was necessary to work all of the gangs on extended time in order to keep pace with this and other commitments such as the control of mosquito and fly breeding as well as cockroach eradication.

Cockroaches:

The use of diazinon in strengths varying from 0,5 to 1,0%, depending on circumstances, remained the choice throughout the year in dealing with this pest in Municipal institutions and public sewers.

In the treatment of Municipal office blocks, diazinon in conjunction with 0,38% pyrethrum mist spray gave excellent results. No resistance to diazinon by cockroaches was noticed.

Bed Bugs:

Although the routine programme of cimex disinfection within the Municipal Bantu hostels was in the main successful, an apparent resistance to mercaptothion was noted which is not altogether surprising as this chemical has been in constant use since 1961.

Various other formulations have therefore been employed and of these D.D.V.P., used as a 5,0% fogging solution, proved effective. However, in this case safety precautions have to be increased by the fullest use of protective clothing and respirators, and climatic conditions must be favourable because dermal poisoning of the operator under hot, humid conditions must be regarded as a definite possibility.

Anti-cimex measures were continued in the Indian housing schemes at Chatsworth and Merebank on payment of a nominal fee by the householder.

Domestic Pest Control Operators:

The tempo of applications for licence to conduct this type of business slowed down considerably during the year. Furthermore, it appeared that a number of small businesses were unable to compete with the services offered by well established firms and consequently ceased operations.

The standard of work carried out by pest control firms has, from the public health aspect,

improved considerably, which can be judged by the few complaints received by the Department in this regard as compared with former years, when several complaints per month were received. It has also been noted that a larger proportion of applicants attained their "Certificate of Approval" and this is attributable to the regular lectures being given to staff by the larger firms.

During the year 24 persons obtained approval enabling them to be employed as pest control operators and, since 1968 when the procedure of testing persons for the requisite certificate was adopted, 103 persons have been successful. At present 38 firms are registered with the Department and are in active operation.

PROSECUTIONS : 1970

Law Contravened	Admitted Guilt	Found Guilty	Fines Paid	Remarks
<u>FOOD, DRUGS AND DISINFECTANTS</u>				
<u>REGULATIONS</u>				
Sausages not conforming to chemical standard	5		R 100,00	
Food containing a preservative not shown on label	1		25,00	
Sale of adulterated food articles (Colouring matter (Orange SS) added to curry powder	1		30,00	
Minced meat not conforming to chemical standard	1		30,00	
Polony not conforming to chemical standard	6		25,00	
vinegar not conforming to standard	2		230,00 55,00	
<u>PUBLIC HEALTH ACT</u>				
Exposure of food to contamination	5		160,00	
Failure to register as a midwife		1	20,00	1 case:R20 or 20 days
<u>SLUMS ACT</u>				
Failure to demolish a slum	3	3	50,00	2 cases:R40 or 40 days (suspended for 1 year) 1 case: R10 or 5 days (suspended for 3 months)

Law Contravened	Admitted Guilt	Found Guilty	Fines Paid	Remarks
<u>SLUMS ACT</u> (continued) Persons entering and being on a slum Persons permitted to reside on property after date fixed for demolition Persons occupying a slum after date fixed for demolition	1	1	R 10,00 -	1 case : R40 or 20 days (suspended for 3 months) 4 cases : R160 or 80 days (suspended for 3 months)
<u>RODENT REGULATIONS</u> Failure to destroy all rodents before demolition	1		25,00	
<u>BUILDING BY-LAWS</u> Failure to provide sanitary facilities	2	2	115,00	1 case : R30 or 30 days 1 case : R30 only
<u>MILK (AND MILK PRODUCTS) BY-LAWS</u> Milk and ice cream not conforming to bacteriological standards Exposure of milk to contamination	13 1	2	490,00 30,00	1 case : R20 or 20 days 1 case : R30 or 30 days

Law Contravened	Admitted Guilt	Found Guilty	Fines Paid	Remarks
<u>GENERAL BY-LAWS</u>			R	
Unauthorised dumping	16	4	490,00	1 case : R5 or 5 days 1 case : R10 or 10 days 1 case : R20 or 20 days 1 case : R40 or 20 days
<u>FOOD BY-LAWS</u>				
Premises not vermin-proofed	2		60,00	
Building not maintained in good order and condition	1		25,00	
Failure to paint interior of premises	2	2	60,00	2 cases : R20 or 20 days
Inadequate supply of hot water		2	25,00	1 case : R10 or 10 days 1 case : R15 or 15 days 1 case : Not Guilty
Inferior/unsuitable furnishings, fittings and fixtures	2	2	65,00	1 case : R15 or 15 days 1 case : R20 or 10 days
Unclean conditions	40	11	1 730,00	1 case : R15 or 15 days 1 case : R20 or 10 days 2 cases : R40 or 40 days 1 case : R30 or 30 days 1 case : R35 or 35 days 1 case : R40 or 40 days 1 case : R45 or 45 days 1 case : R75 or 50 days 1 case : R35 only 1 case : R80 only

Law Contravened	Admitted Guilt	Found Guilty	Fines Paid	Remarks
<u>FOOD BY-LAWS (continued)</u>			R	
Unsound utensils	4		90,00	
Failure to provide storage facilities	2	1	45,00	1 case : R15 or 15 days
Food not refrigerated or heated	3	1	65,00	1 case : R5 or 5 days
Exposure of food to contamination	20	9	745,00	2 cases : R20 or 20 days 2 cases : R30 or 30 days 3 cases : R60 or 60 days 1 case : R80 only 1 case : Cautioned and discharged
Sale of contaminated food	3	2	180,00	1 case : R20 or 20 days
Food not effectively wrapped	1	1	35,00	1 case : R75 or 50 days
Food room used as sleeping quarters	1	1	50,00	1 case : R15 or 15 days
Storage and sale of food from premises not suitable therefor	2	1	105,00	1 case : R10 or 10 days
Incompatible articles in food room	1	1	30,00	1 case : R50 or 50 days
Live animals in food room	3	1	75,00	1 case : R10 or 10 days
Clothing hanging in food room	7	2	160,00	1 case : R20 or 20 days 1 case : R15 or 15 days 1 case : R5 only

Law Contravened	Admitted Guilt	Found Guilty	Fines Paid	Remarks
<u>FOOD BY-LAWS</u> (continued)			R	
Failure to provide suitable containers for offal conveyance	3		40,00	
Vehicle not registered	3		40,00	
Delivery of bread in a vehicle that was not approved for the purpose	1		15,00	
Food stored and conveyed in part of vehicle not intended for such use	1		20,00	
Dirty vehicle	4		80,00	
Inadequate supply of towels	4	3	135,00	1 case : R10 or 10 days 1 case : R15 or 15 days 1 case : R10 only
Failure to provide protective clothing	1	1	40,00	1 case : R20 or 20 days
Failure to provide suitable refuse receptacles	1		10,00	
Pre-cooked food not conforming to bacterial standards	10		265,00	

Law Contravened	Admitted Guilt	Found Guilty	Fines Paid	Remarks
<u>PUBLIC HEALTH BY-LAWS</u>			R	
Failure to maintain water and sanitary fittings in good order	1	2	35,00	2 cases : R20 only
Failure of occupier to maintain premises in a clean condition	1		40,00	
Failure of owner to maintain premises in a clean condition	4	7	230,00	1 case : R10 or 10 days 1 case : R20 or 10 days 2 cases: R20 or 20 days 1 case : R30 or 30 days 2 cases: R15 only
Fly development	6		165,00	1 case : R5 or 5 days
Structural defects	6	6	275,00	1 case : R10 or 5 days 1 case : R10 or 10 days 1 case : R20 or 20 days 2 cases : R30 only

Law Contravened	Admitted Guilt	Found Guilty	Fines Paid	Remarks
<u>PUBLIC HEALTH BY-LAWS (continued)</u>			R	
Drainage defects	2	1	45,00	1 case : R30 or 30 days (suspended for 1 year)
Lack of suitable drainage		2	20,00	1 case : R10 or 5 days
Inadequate lighting and ventilation		1	10,00	1 case : R10 or 10 days
Failure to renovate exterior of building	1	3	40,00	1 case : R10 or 10 days 2 cases: R10 only
Failure to provide refuse receptacles		3	45,00	1 case : R10 or 10 days 1 case : R15 or 15 days 1 case : R20 or 20 days
Removal of offensive matter/refuse	1		30,00	
	203	83	7 010,00	

X. HOUSING

The staff of the Housing Inspectorate comprises a Senior Health Inspector (part-time) and two Health Inspectors who are engaged on housing matters generally, including demolitions and slum clearance.

During the year under review plans for residential development, referred for departmental approval on public health grounds, are summarised below:

Accommodation	Rooms						Units	Plans
	1	2	3	4	5	6+		
Dwellings		4	19	243	277	348	891	891
Flats	428	483	635	188			1 784	105
Other Residential Additions								9
								2 630
Total							2 675	3 635

In terms of the Housing Act no person may demolish, or convert to other use, housing accommodation without the approval of the Minister, for which purpose application must first be lodged with the local authority.

In the course of the year, 353 such applications were submitted respecting premises occupied (or previously occupied) by 148 European families, 21 Coloured, 80 Indian and three of various races. Of the 353 premises inspected, 96 were found at the time of investigation to be owner-occupied, 156 were occupied by tenants and 101 were vacant. Departmental recommendation was conditional upon the occupiers obtaining alternative accommodation.

These applications for permission to demolish or convert dwellings were lodged with the undermentioned projects in view:

Flats/maisonettes	116	Industrial usage	43
New dwellings	56	No immediate	
Commercial purposes	52	development	61
		Miscellaneous	25

The Department's routine slum clearance programme was continued throughout the year under the overall direction of the Deputy City Medical Officer of Health who personally carried out inspections of the 191 premises which were surveyed and processed for presentation to the Slum Clearance Court for the Durban Local Authority area. Of these premises, 94 were occupied by Indians, 35 by Coloureds, and 3 by Europeans. Premises occupied by persons of more than one race totalled 59.

A number of properties were of a multi-layout character ranging from 2 dwelling units in some cases to 9 in others, in all a total of 291 buildings. These were tenanted by 1 038 family units of 4 525 persons.

The Slum Clearance Court was convened on 48 occasions and, after due enquiry, issued slum declarations in respect of 149 premises. The Court ordered demolition in the majority of cases, the remainder of the orders being for renovation and repair.

Not all cases processed were declared slums and many were not proceeded with for various reasons, mainly due to acquisition by the rehousing authorities. It is interesting to record the comparison between 1969 and 1970 when in the former year 58 premises were declared slums as against 149 in 1970. This large increase was due mainly to the Court's revised policy of slum declaration despite voluntary applications by owners to demolish as against the earlier practice of deferring consideration of such cases.

Since 1965, when slum clearance was resuscitated in Durban, to the end of the current year, this Department has dealt with 1 036 properties involving 1 419 actual houses. These were occupied by 3 845 families comprising 18 904 persons.

The Slum Clearance Court in this same period made 459 declarations, calling for complete demolition in the case of 358 premises and partial demolition or repair of the remainder.

It is significant that many owners, when confronted with the prospect of action under the Slums Act, preferred to remedy the unsatisfactory structural situation themselves and in so doing 221 properties were demolished and 16 were repaired.

111
ECONOMIC HOUSING



HILLARY - WHITE



CHATSWORTH - INDIAN

economic flats and 9 duplex units, in the same area, and these are still under consideration. A contract covering the third stage of 114 houses is about to be awarded and it is anticipated that work will commence in 1971.

Construction work on a block of 77 sub-economic flats in Leathern Road progressed favourably and it is anticipated that they will be ready for occupation early in 1972.

The Home for Retired Durban Citizens which will house some 460 persons is nearing completion and should be ready for occupation early in 1971. The application submitted to the National Housing Commission for an additional 28 rooms at Arcadia Homes on the Bluff still awaits approval.

A European township is being planned at Umkumbaan which will ultimately contain 2 300 dwellings.

Altogether, as at the 31st July 1970 the City Council had built 2 205 economic houses for Europeans, which were sold on a basis of a small deposit and a reasonable monthly instalment. At the same date 2 028 houses had been built by private tender when the applicant was allocated a site (Council-owned land) or where the applicant had purchased land privately. In addition 1 115 European flats were leased to the public in Durban at rentals very much lower than those required by private enterprise. Sub-economic flats numbering 217 were rented to aged couples and people of limited means. The number of these flats will rise to 711 on completion of Bill Buchanan Park and the Leathern Road Building.

During the year the Department of Community Development commenced the construction at Van der Walt Park, on the Bluff, of a scheme of some 90 economic houses of which 40 have already been completed and occupied.

Coloured Housing

Two schemes, one for 231 economic flats off Rippon Road, Sydenham and one for 144 economic and 156 sub-economic flats in the Merebank Coloured Housing Scheme were submitted to the National Housing Commission for approval.

Despite the development envisaged, the demand for housing from this race group remained most acute and the proposed development will meet only half the applications received for assistance by the year end. This shortfall will be relieved as the Department of Community Development has contributed substantially during the year by commencing the following schemes:

- (a) 98 sub-economic houses at Austerville of which 60 are occupied;
- (b) 524 sub-economic houses at Wentworth of which 80 have been completed;
- (c) 360 sub-economic flat units of which 50 have been completed and occupied.

Work is proceeding to complete these schemes as soon as possible, and in addition to the above, a scheme for 108 economic houses passed the planning stage and tenders are being called for.

The Coloured community, as at 31st July 1970, has been provided by the City Council with 789 economic houses sold at low deposits and reasonable repayments spread over 30 and 40 year periods. This community has also been assisted with loans for the erection of 205 dwellings, and in addition 161 sub-economic units are let at the present time.

Indian Housing

In addition to the housing work already in hand, contracts were commenced covering the erection of 340 sub-economic flats and 822 economic dwellings. In all, 2 626 dwellings were completed during 1970. The development of services in the new north-western extension of the Chatsworth scheme, Unit 11, was commenced in anticipation of approval for the erection of 1 513 economic and sub-economic units in this area. A further application for 450 sub-economic flats, in Unit 10, was submitted for approval.

A project covering the erection of 99 houses in the Merebank/Wentworth area was submitted for approval, the majority of these dwellings being required for families who will be displaced as a result of construction of the Southern Freeway extension. A contract for the erection of 202 lower sub-economic units of accommodation in this vicinity was awarded and work is due to commence early in 1971.

Negotiations for the acquisition of land required for the proposed Newlands and Phoenix Indian townships continued, and it is expected that it will be possible to commence development of the Phoenix scheme during the latter half of 1971. In this regard, Council approval of the layout of Community Area No.4 has been obtained and an application for approval and an allocation of Government housing funds for the construction of the necessary services has already been made. The Bantu Administration Department required that 174 Bantu families in the Newlands area were to be re-housed in other Bantu housing schemes as a prerequisite to a commencement of the aforesaid project.

Approximately 4 000 houses were erected by the City Council by 31st July 1970 and were allotted to Indian families under economic selling schemes. A further 10 500 were occupied under Lease Agreements with option to purchase. Indian applicants numbering 1 616 were financially assisted to enable them to erect their own homes on sites sold by the City Council or on land purchased privately. In regard to sub-economic schemes for Indians, approximately 6 080 flats and houses were rented to families whose breadwinners' wages were less than R60 per month.

Bantu Housing

During the year, 369 houses were completed at kwaMashu. Consideration is, however, being given to the planning of an area formerly reserved for a cemetery for the erection of more houses. Houses in the township now total approximately 15 400.

One unit of cottage hostels for single Bantu males, with a total of 1 700 beds, became available thus making a total township population of some 120 000 persons.

As indicated in last year's Annual Report in respect of the hostel complex of 17 000 beds at Umlazi Glebe, no further developments have taken place since the revised scheme to reduce unit bed cost was submitted for State approval.

Schemes being developed by the City Council on behalf of the African Bantu Trust included a considerable extension of the Umlazi Bantu Township. This Bantu housing project, which is growing rapidly,

is a project larger than kwaMashu and ultimately there will be 22 000 houses. So far some 18 000 houses and 7 882 beds for single accommodation have been completed.

The development of the Ntuzuma Township to the west of kwaMashu was commenced during the year and the first 124 houses were handed over for allocation. It is expected that funds to bring the development rate up to 6 houses per day, together with administration, school and ancillary buildings, will be provided during 1971.

The following details reflect the Municipal Bantu housing position in the City as at 31st December 1970:-

<u>Municipal Family Housing</u>	<u>Number of Units</u>	<u>Estimated Population</u>
Lamont Extension	1 911	20 700
Lamont Extension Economic Housing	851	
Chesterville	1 265	9 300
kwaMashu	<u>15 398</u>	<u>106 000</u>
	<u>19 425</u>	<u>136 000</u>

<u>Bantu Single Accommodation</u>	<u>Beds</u>
Dalton Road	1 450
Jacobs	886
S.J. Smith	4 481
kwaMashu Location Hostel Unit	16 880
Umlazi Glebe (Hostel beds)	2 993

Bantu Women

Thokoza Women's Hostel, Grey Street	684
	<u>27 374</u>

In addition to permanent residents at these institutions, tickets for casual accommodation were issued nightly and lodgers' permits were issued in family locations.

Other forms of Bantu housing available include domestic servants accommodated by householders and various classes of employees housed by private employers, State and Provincial authorities and premises licensed under Section 9 (4) of the Bantu (Urban Areas) Consolidation Act No.25 of 1945, as amended.

XI. MILK SUPPLIES

Durban's milk supplies are drawn in the main from the Natal Midlands and Southern Natal although East Griqualand provides 13,3% (12,5%) of the total gallonage of fresh milk produced in the City's milk-shed.

Milk from registered producers is either transported in cans directly to one of the three factories situated in and near the City or is bulked and cooled at one of seven up-country balancing stations prior to transportation to Durban by road tanker. Milk is also collected from 71 (63) refrigerated bulk storage tanks on farms by road tankers. Thus most of the City's milk is transported by tanker.

On arrival the greater portion of the milk is pasteurised and bottled, canned or cartoned. It is then delivered in refrigerated pantechinons to suburban distribution depots from whence delivery to households and retail outlets is effected. House to house delivery is by means of handcarts or electric "prams". Only heat-treated milk is sold in the City, and apart from pasteurised milk a daily average of 4,865 (4,878) gallons of milk was sterilised in the course of the year. The balance of the intake was used for the production of pasteurised cream and skim-milk and supplemented by milk powders, ice cream and various cultured milk products.

Milk Gallonage

The mean daily intake of raw milk during 1970 amounted to 55 440 (51 321) gallons. After processing, approximately 28% (26%) of this milk was sold in neighbouring towns and to shipping.

Sampling

Samples of milk and milk products were taken regularly and submitted for testing, as follows:-

I. Samples taken under the Food, Drugs and Disinfectants Act:

(i)	City Analysts	Cream	Nil	(18)
		Ice Cream	Nil	(24)
(ii)	State Chemical Laboratory	Milk	141	(156)
		Cream	36	(18)
		Ice Cream	48	(24)

II. Samples submitted to City Pathologist for bacteriological examination:

Milk	170	(156)
Cream	13	(5)
Ice Cream and soft dairy mix	29	(33)

III. Samples submitted to State Health Laboratory for biological tuberculosis examination:

Milk	19	(17)
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IV. Samples submitted to the Departmental Milk Laboratory:

Raw bulked herd milk	5 589	(5 224)
Pasteurised milk	791	(757)
Pasteurised cream	183	(166)
Ice cream	930	(745)
Soft dairy mix	335	(302)
Iced confections	224	(143)

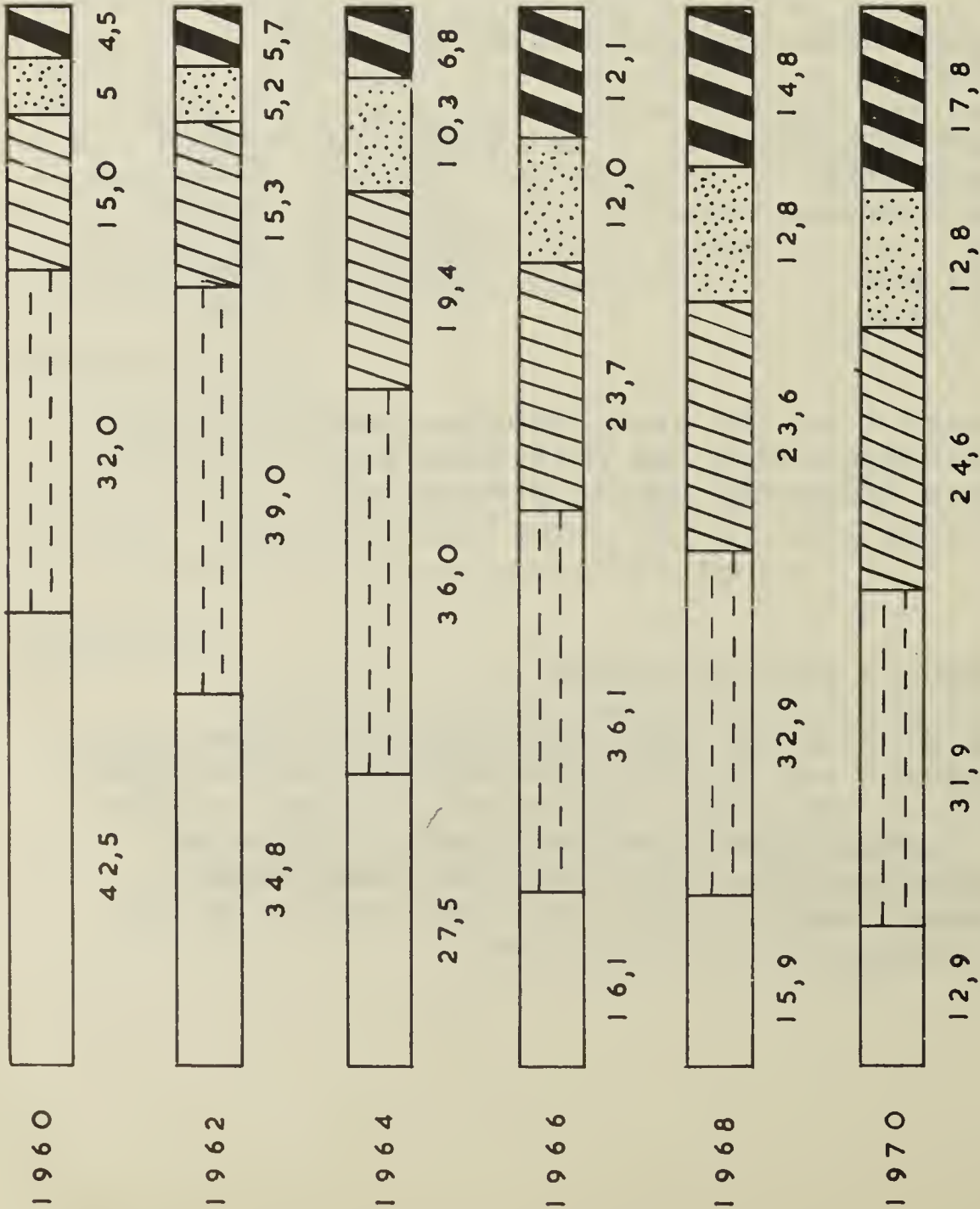
Arising from the above examinations 17 prosecutions were initiated under the Milk (and Milk Products) By-laws and five under the Public Health Act.

RAW MILK

Milk Producers and Production

During 1970, 31 (17) new producers were registered with the Department and 59 (39) discontinued production, leaving a total of 517 (545) registered dairymen at the year's end. Among those removed from the register were 13 dairymen supplying the Port Shepstone depot because the depot owners stated that all this milk was required for consumption in that area.

PERCENTAGE OF PRODUCERS



LEGEND

GALLONS OF MILK	
	UNDER 50
- - - - -	50 - 100
/ / / / /	101 - 150
.	151 - 200
/ / \ \	OVER 200

YEAR	NUMBER OF REGISTERED PRODUCERS	AVERAGE DAILY PRODUCTION	AVERAGE DAILY MILK INTAKE INTO DURBAN
1960	710	72,0 GALLS	33 648 GALLS
1961	735	67,4	34 701
1962	659	76,0	36 139
1963	621	75,0	37 646
1964	600	95,3	40 313
1965	618	91,3	42 313
1966	596	105,6	45 012
1967	597	116,2	46 780
1968	567	125,6	48 709
1969	545	141,6	50 982
1970	517	142,7	55 440

DAILY MILK PRODUCTION OF REGISTERED PRODUCERS, AND RELATED INFORMATION

After a promising start to the summer, dairying conditions became decidedly unfavourable from a prolonged drought which affected milk production to such an extent that during April and May it was necessary to permit the introduction of a limited amount of milk from unregistered sources in the Orange Free State. This milk, which was for sterilising only, amounted to some 80 000 gallons.

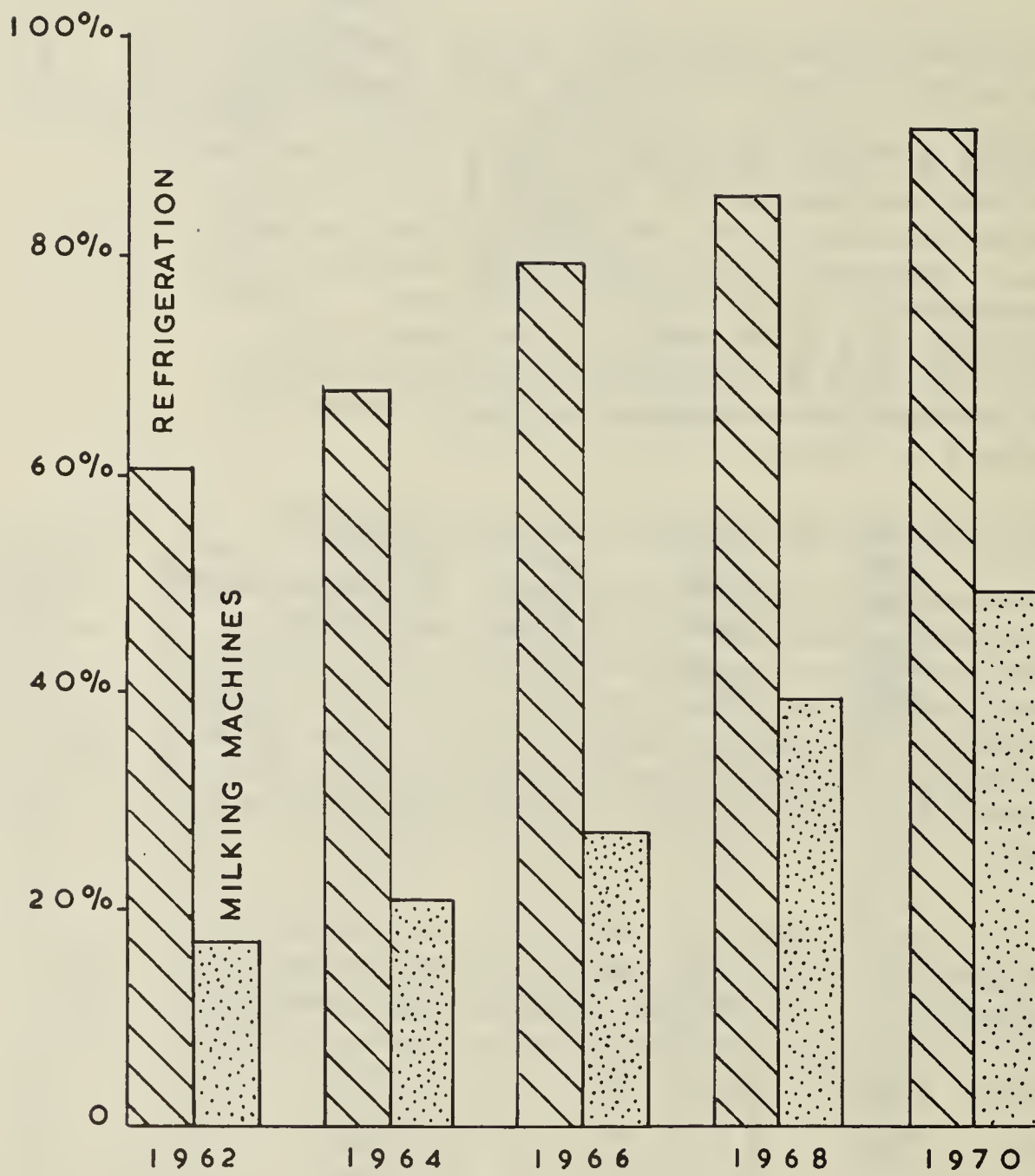
Probably due entirely to the serious drought the mean daily production of registered producers fell to 73 771 (77 196) gallons. This was a reversal of the trend of recent years where a continual reduction in the number of producers has gone hand in hand with an annual rise in milk production. However, the mean daily output per producer amounted to 143 (141,6) gallons. Peak production occurred in November when the daily mean was in the region of 83 000 gallons, while the lowest production occurred in April when the figure dropped to some 67 000 gallons.

Producer Standards and Inspectional Programme

Certain minimum structural requirements are insisted upon for all registered producers, and in addition adequate mechanical refrigeration must be provided by all new producers. All farm dairy premises were scored in respect of the standard of structure and equipment in use, and the subjoined table sets out the overall position in this regard:

Standard of Premises	Percentage conforming to Departmental Requirements	
91% - 100%	17,2%	(21,5%)
81% - 90%	74,3%	(64,0%)
71% - 80%	8,5%	(14,5%)

At the end of 1970 92% (88%) of registered farm premises were equipped with refrigeration facilities, and the number of farmers using mechanical milking again increased and at the end of the period under review 49,5% (44,6%) of registered producers had milking machines.



PERCENTAGE OF REGISTERED PRODUCERS EQUIPPED
WITH MECHANICAL REFRIGERATION AND
MILKING MACHINES

The inspectional staff consists of a Senior Dairy Inspector and three Dairy Inspectors who carried out the following programme during the year:

(i)	Inspections of City dairy premises	1 194 (889)
(ii)	Inspections of country dairies (farms)	1 768 (1 313)
(iii)	Inspections of country receiving depots	300 (203)
		<hr/>
		3 262 2 405
		<hr/>

Inland Balancing Stations

The majority of producers' milk was sampled at inland balancing stations prior to bulking and at the same time the sediment test was carried out in respect of those farmers supplying milk in cans. During the year 1 585 (2 755) gallons of milk were rejected because of excessive visible dirt. Milk cans were regularly inspected to ensure a satisfactory condition. The standard of hygiene at these balancing stations was continually observed and from time to time rinse samples were taken from tanks, pipelines, etc., to ensure that a satisfactory standard of sanitisation was being maintained.

Laboratory Testing of Producer (Farm) Milk

The bulked milk of each producer was sampled approximately once per month by an inspector at the receiving depot, and returned to the laboratory under refrigeration. The following were the sample results obtained:

Test	No.of Samples	% Satisfactory
Resazurin (1 hour)	5 555 (5 187)	94% (93%)
Visible dirt	4 930 (5 052)	90% (87%)
Inhibitory substances (T.T.C.)	5 590 (4 982)	94% (93%)
Thermoduric count	5 589 (5 224)	83% (81%)
Mastitis (leucocyte count)	5 564 (5 630)	94% (94%)
Brucellosis (stained antigen)	1 517 (565)	92% (96%)
Tuberculosis (biological)	19 (17)	100% (94%)

The standards applied in interpreting the tests were:

- One hour Resazurin test - fail if disc reading below $2\frac{1}{2}$;
- Thermoduric organisms - unsatisfactory if counts over 50 000 per ml;

Leucocyte count - possible mastitis if count exceeds one million cells per ml.

In addition to herd milks, tanker supplies of milk arriving in the City were regularly sampled and tested, and the tankers themselves were frequently examined to ensure adequate sanitisation.

Where considered necessary, or at the request of producers, farm water samples were bacteriologically examined. This aspect is obviously most important as the production of clean milk and the incidence of mastitis so often hinge on the quality of the water used. Whenever unsatisfactory results were obtained dairymen were urged to introduce at least a chlorinated water supply.

HEAT-TREATED MILK AND MILK PRODUCTS

Pasteurising Depots and Ice Cream Factories

These premises were visited frequently and a constant scrutiny was kept on the standard of general hygiene of personnel and premises. The factories' own laboratory staff maintained a constant quality control over their products, but assistance was given in attempting to trace the source of any post-pasteurisation contamination that occurred.

All staff at milk factories likely to come into contact with milk and milk products were Vi-tested and immunised against typhoid. A total of 862 (564) persons were involved.

Production

The mean daily production of 55 141 gallons by the three milk factories was made up as follows:

Pasteurised milk	44 916 gallons
Sterilised milk	4 865 gallons
Other milk products	5 360 gallons

Pasteurised milk was marketed as follows:

Bottles	81%
Cans	12,5%
Plastic cartons	6,5%

Ice cream was made at two local factories and imported from factories in Boksburg and Pretoria, with one small factory at Isipingo making sherbet. Approximately 250 000 gallons of ice cream was imported from

these centres in 1970 while some 237 000 gallons was exported to other cities and towns. It is estimated that during the year 995 000 gallons of ice cream and sherbet were consumed in the City, a daily average of some 2 726 gallons.

Laboratory Control

(a) Pasteurised Milk:

The following results were recorded from samples examined in the course of the year:-

Test	Number of Samples bottled milk	% Satisfactory	Number of Samples (milk in cans)	% Satisfactory	Number of Samples (milk in cartons)	% Satisfactory
E. coli (presumptive)	791 (757)	92% (88%)	157 (138)	93% (93%)	144 (124)	98% (91%)
E. coli I (faecal)	242 (172)	98% (99%)	2 (9)	100% (100%)	1 (20)	100% (100%)
Phosphatase	791 (757)	100% (100%)	157 (138)	100% (100%)	144 (124)	100% (100%)
Total counts	791 (757)	71% (78%)	157 (138)	85% (94%)	144 (124)	84% (83%)
Thermoduric counts	775 (709)	66% (63%)	157 (138)	76% (96%)	144 (124)	80% (95%)

An arbitrary standard of 15 000 thermoduric organisms per ml was set while the total count standard applied was 50 000 organisms per ml.

Samples of sterilised milk were regularly checked for sterility, always with satisfactory results.

(b) Ice Cream

Factory wrapped and packed samples from each of the registered manufacturers were regularly tested, as under:-

Test	Number of Samples		% Satisfactory	
E. coli (presumptive)	393	(386)	90%	(95%)
E. coli I (faecal)	39	(19)	100%	(100%)
Total counts	393	(386)	98%	(99%)
Phosphatase	393	(386)	100%	(100%)

In addition, scooped ice cream was regularly sampled from restaurants and tearooms to check the hygiene of storing and serving this product. Establishments with a good bacteriological history were sampled relatively infrequently, greater attention being paid to those premises serving ice cream of a lower bacteriological quality. Some 69 (86) different outlets were sampled, the results being:

Test	Number of Samples		% Satisfactory	
E. coli (presumptive)	537	(359)	63%	(44%)
E. coli I (faecal)	209	(146)	88%	(100%)
Total counts	537	(359)	71%	(68%)
Phosphatase	537	(359)	100%	(100%)

(c) Soft Dairy Mix

This product was sampled at the point of manufacture and again at retail outlets to review the hygienic operation of dispensing machines. Tea-rooms and vehicles numbering 42 (41) were licensed to sell soft mix. The results of tests carried out were:

Test	Number of Samples		% Satisfactory	
E. coli (presumptive)	335	(302)	75%	(69%)
E. coli I (faecal)	91	(81)	100%	(100%)
Total counts	335	(302)	90%	(92%)
Phosphatase	335	(302)	100%	(100%)

(d) Cream

Only pasteurised cream processed by the three registered milk dealers was sold to the public, and this was sampled and tested as follows:

Test	Number of Samples		% Satisfactory	
E. coli (presumptive)	183	(166)	81%	(76%)
E. coli I (faecal)	42	(28)	72%	(75%)
Total counts	183	(166)	82%	(90%)
Phosphatase	183	(166)	100%	(100%)

(e) Iced Confections

As milk is incorporated in some of these 'iced lollies' they were included in the routine bacteriological programme of scrutiny. Various sherbets were included:

Test	Number of Samples		% Satisfactory	
E. coli (presumptive)	224	(143)	75%	(70%)
E. coli I (faecal)	59	(51)	100%	(100%)
Total counts	224	(143)	93%	(90%)

Summary of Tests Carried out in the
Departmental Laboratory

The Veterinary Medical Officer, assisted by two Lady Laboratory Assistants, was responsible for carrying out the various tests set out below, the majority of which were performed as a routine:

Milk and Milk Products:

Tests for visible dirt	4 930	(5 052)
Presumptive E. coli determinations	3 119	(2 840)
Eijkmann tests for E. coli I	684	(560)
Plate counts (Astell Roll Tube)	3 143	(2 858)
Thermoduric organism counts	7 396	(7 218)
Resazurin dye reduction tests	5 555	(5 280)
Phosphatase tests (Aschaffenburg & Muller)	2 771	(2 436)
Brucellosis (stained antigen ring test)	1 517	(565)
Mastitis (leucocyte counts)	6 854	(5 630)
Inhibitory substances (T.T.C. method)	6 160	(5 799)
Clot-on-boiling tests	24	(26)
Sterilised milk (turbidity test)	24	(26)
Examination for Salmonellae in pasteurised milk products	127	(75)

Prepared Foods:

Enterobacteria isolations	152	(143)
Staphylococcal identifications	152	(143)
Eijkmann tests	152	(143)

Water Samples:

Membrane filter (coliform counts and E. coli I)	97
Rinse samples (presumptive coli- forms and counts)	147

ANIMAL DISEASES AFFECTING MILK SUPPLIESMastitis

Routine examination of herd milks revealed that approximately 6% of herds suffer from a serious mastitis problem. While sub-clinical forms of the disease are probably present in over 90% of herds, a special effort was made to assist those farmers whose bulk milk consistently showed positive results. They were advised on milking methods, hygiene, teat dipping and if necessary antibiograms were performed.

The Division of Veterinary Services continued to investigate mastitis in Natal, and the departmental laboratory staff assisted producers in examining cow and quarter samples for the identification of sub-clinical and carrier cases. This disease is the most important disease of dairy animals from the economic point of view.

Bovine Tuberculosis

Following upon abattoir returns, 19 herd milk samples were submitted for biological examination for tuberculosis. All proved negative. This disease appears to be on the wane amongst European owned cattle and the Division of Veterinary Services reported that there were 222 accredited tuberculosis-free herds in Natal, over 44 400 cattle being tuberculin tested in the region during the year.

Brucellosis

Approximately 8% of the 1 517 samples of raw milk tested gave a positive reaction to the Ring test. Of the 2 654 serum agglutination tests done at Allerton Veterinary Diagnostic Laboratory 11,7% were positive or doubtful. These figures depict an increased incidence compared with the previous year, but it is expected that this trend will be reversed once the compulsory inoculation campaign has been operational for several more years.

Other Diseases

The other "erosion" diseases, internal parasitism and infertility, remained the major scourges of the dairy herd together with those diseases already discussed. Allerton Diagnostic Laboratory recently carried out particularly interesting and extensive work on deficiency conditions in livestock with special regard to infertility and impaired production. The most commonly occurring deficiencies were found to be phosphorus, Vitamin A, sulphur, magnesium and copper. Infectious infertility diseases continue to be better controlled by the increasing use of artificial insemination.

Tick-borne diseases and mineral and vegetable poisoning were sporadic in occurrence although Babesiosis caused the usual heavy mortality among Bantu-owned cattle.

GENERAL

(1) Ten final year Veterinary Science students spent three weeks during their vacation in the Veterinary Hygiene Section of the Department and at the City Abattoir seeing practical veterinary public health work at first-hand.

(2) Senior Non-European medical students from the University of Natal were shown all aspects of milk and meat hygiene control as carried out in the City.

XII. ALLIED HEALTH SERVICES

Certain public health or allied functions are undertaken by sister departments and the City Health Department is indebted to the City Engineer, Director of Municipal Abattoir and Director of Parks, Recreation and Beaches for the following information, most of which is quoted verbatim:

ABATTOIR SERVICES

(a) During the year in question there has been considerable improvement in the hygienic aspect of meat handling. The implementation of legislation requiring the use of dressing beds on cattle slaughter floors; electrical pre-stunning of sheep; the provision of suitable protective clothing; the prohibition of smoking in areas where meat is being handled; the introduction of fixed breaks for washing down and sterilizing slaughter floors and the provision of fully enclosed, insulated vehicles equipped to carry meat in a hanging position has been responsible for the improvement in hygienic handling methods in the Abattoir.

Offerings of slaughter stock have, with the exception of pigs, continued to increase and additional pens are in the process of being erected to ensure that adequate lairage facilities are available to handle live-stock arrivals. This increased throughput has placed a heavy burden on the Inspectorate staff and, despite an increase of 6 positions in the establishment of this section and an extensive advertising campaign, it has only been possible to recruit one additional Meat Inspector.

The re-inspection of all meat introduced for consumption in the City continues as before and includes all whale meat from which random samples are taken for bacteriological testing.

(b) No further progress has been made towards the erection of a new abattoir and, in fact, because no agreement could be reached between the Abattoir Commission and the City Council on conditions upon which the Council would undertake this task, the Council has advised the Commission to feel free to negotiate the erection of a new abattoir with other interested parties.

However, the Council has agreed to accept the responsibility of keeping the existing abattoir in operation until 1975 and to provide additional facilities to cope with the required future throughputs, if possible, until that date. With this object in view a sub-committee was formed, which included trade representatives, to formulate recommendations on how this could be achieved at the least cost to the Council. This Committee has recommended alterations to existing sheep slaughtering facilities plus the provision of a new, mechanised sheep dressing floor, alterations to certain cattle slaughter floors, improvements to the sheep "race" and the provision of additional sheep pens as well as the removal of paunch contents by pumping operations. These alterations and improvements are estimated to cost R400 000 and, subject to the necessary approvals being obtained, would require approximately one year before they could be commissioned.

(c) Animals slaughtered and carcasses condemned at the Municipal Abattoir during 1970 are given below:

Animal	Slaughtered	Condemned		
		Car-cases	Halves	Lbs.
Bovines:				
Adults	154 303 (145 748)	2 822	1	323 110
Calves	15 753	728		1 110
Swine	131 241 (121 883)	1 705	-	82 265,5
Sheep	967 698 (901 765)	3 481	117	1 339 926
Goats	20 203 (16 920)	123	2	-
	1 289 198 (1 186 316)	8 859	120	1 746 411,5

CEMETERY AND ALLIED SERVICES

Particulars in regard to the disposal of human remains were as follows:

Race Group	Interments	Pauper Burials	Cremations
White	1 008 (1 163)	7 (6)	1 761 (1 403)
Asiatic	770 (1 113)	12 (3)	727 (615)
Bantu	5 987 (6 376)	740 (672)	- -
Other	306 (355)	16 (7)	- -
Total	8 071 (9 007)	775 (688)	2 488 (2 018)

The following is a summary, expressed as percentages, of bacteriological examination of water for E. coli Type I derived from Durban's two sources, the Umgeni and Umlaas Rivers, the vast majority of supplies being obtained from the former:

(i) Umgeni River Water:

E. coli I per ml	Nagle Dam			Durban Heights	
	Inlet	New Outlet	Old Outlet	Works Inlet	Rapid fil- ter Outlet
0	47	47	39	47	99
1 - 2	-	29	33	30	1
3 -10	6	12	22	20	
11 -25	-	6	6	3	
26-100	41	6			
101-200	6				

(ii) Umlaas River Water:

E. coli I per ml	Shongweni Works		Northdene Works
	Umlaas River	Dam Outlet	Sand Filters Out- let
0	5	49	97
1 -2	3	17	2
3-10	17	32	1
11-25	12		
26-100	32	2	
101-200	19		
201-500	10		
501-1 000	2		

(iii) Umlaas River Water:

E. coli I per ml	River at Intake	Umlaas Works Inlet	Coedmore Works Slow Sand Filters
0	6	83	98
1- 2	6	11	1
3-10	6	6	1
11-25	6		
26-100	23		
101-200	17		
201-500	13		
501-1 000	17		
Over 1 000	6		

All results of samples at works after chlorination showed absence of *Escherichia coli* type I.

(iv) City Waters:

Total Organisms count per ml	%
0 - 10	94
11 - 20	3
21 - 50	2
Over 50	1

The swimming baths under the control of Parks, Recreation and Beaches Department and Department of Bantu Administration were visited regularly and the pool supervisors and Beach Superintendent advised on treatment and chlorination to ensure a bacteria-free clean water in the baths.

Commissioning of the new Beach filtration plant for the paddling pools should be completed shortly and this should assist in better treatment and chlorination of the water for these pools.

The regular twice monthly bacteriological surveys of sea water at the beaches from Beachwood to Isipingo gave satisfactory results.

Control of the purification of water in 8 European swimming baths and 6 paddling ponds as well as 5 Coloured/Indian/Bantu baths and 1 Indian paddling pond was maintained by regular visits, analytical checks and advice to pool supervisors.

(b) Public Cleansing Services

During the year approximately 760 000 cubic yards of refuse was collected and disposed of to the Municipal Tipping Sites - an increase of 153 000 cubic yards over the year 1969.

This increase is attributed to the natural growth and extensions of the refuse removal service together with the increase in use of packaging now being utilised for household products.

As in other centres this tendency to pack articles in containers has greatly altered the quantity and composition of domestic refuse. This is clearly indicated by the quantity lifted in November, 1970, which was 63 000 cubic yards as compared with the month of December where the quantity increased to 75 000 cubic yards.

Despite intensive investigations into alternative means of disposal the system of disposal by hand fill continued. However, in view of the large number of dwellings in the vicinity of the Tara Road tip site, this tip has been closed and all refuse from the Southern areas is now being disposed of at Lamont, where the material is being utilised to reclaim disused sewage maturation ponds. To avoid any possible contamination the pond is being treated with Chloride of Lime prior to tipping to ensure that no soil from the bed is utilised for final coverage.

New cleansing depots have now been made available for the Town and Beach/Point districts with additional ablution facilities provided at other depots. These facilities are now available for all labourers in this division.

In January, 1970, the Department serviced 163 000 sanitary pails, the equivalent of approximately 12 550 properties. This number fell in December, 1970, to 136 000, the equivalent of 10 500 properties. This fall is attributed to extensions of the sewer mains into areas formerly reliant upon a pail service.

(c) Public Conveniences:

A new Non-European public convenience was completed and brought into use in Albert Park. This convenience replaces one which was demolished to make way for the Southern Freeway.

Plans have been completed, and it is anticipated that new Non-European conveniences will be erected during 1971 in the vicinity of King Edward VIII Hospital and at the intersection of Crescent Street and Brickfield Road.

(d) Air Pollution:

Two hundred and eighty cases of smoke nuisance were rectified, one hundred and one Contravention Notices were served in terms of the Smoke Control Regulations, and fifty-four applications to install fuel-burning appliances, were approved from the Air Pollution Control aspect. The increasing use of smokeless fuels, mechanical stokers and oil fuel by industry, hotels and blocks of flats, has reduced smoke pollution and a record number of sixty-seven concerns qualified for the Council's Certificate of Merit for excellent smoke control.

Close liaison has been maintained with the South African Railways' own Smoke Inspector and three hundred and thirty-six instances of excessive smoke from locomotives have been reported to him for attention. Smoke control by shipping has generally been satisfactory, but a number of ships were visited as a result of excessive smoke emission which the Inspector managed to bring under control. Attempts to control diesel smoke by prosecuting offenders in terms of Section 161 of the Road Traffic Ordinance, and Section 81(c) of the Road Traffic Regulations did not meet with success, and the court ruling confirmed that, until a diesel smoke limit was established, it would be difficult to secure prosecution of offenders. A Hartridge smoke meter was therefore purchased, and, after a period of experimental use at the Municipal Testing Grounds to enable vehicle operators to familiarise themselves with requirements, it was used by road patrols to apprehend offenders. The State Health Department has indicated that a regulation based on this Hartridge smoke meter will be promulgated in 1971.

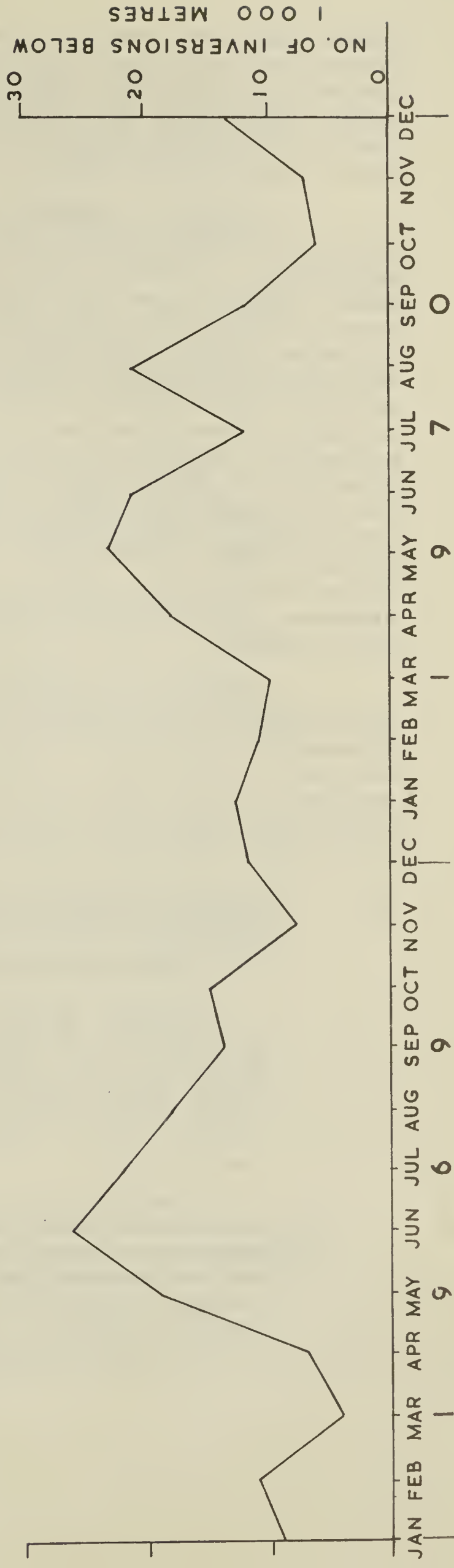
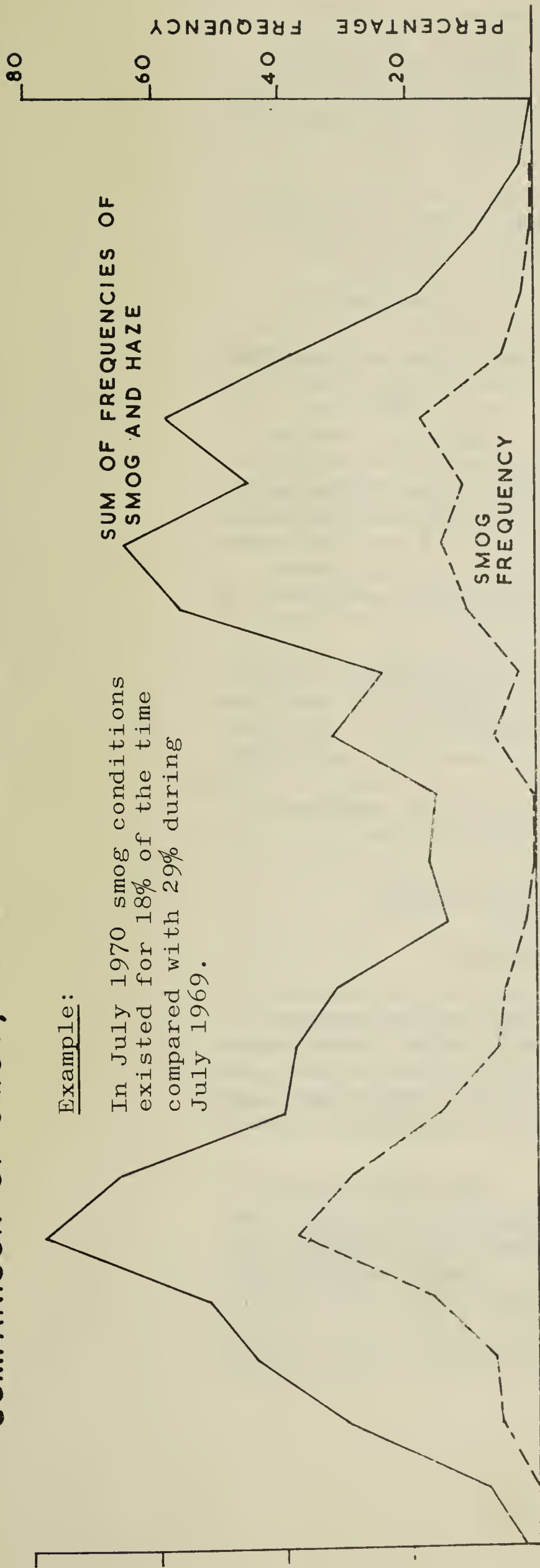
The control of dust and odour emission by Durban firms has been satisfactory and the pollution levels in Durban compare favourably with results obtained in other South African cities. There is a build-up of air pollution during the winter inversion season and pollution levels were lower during 1970.

Good development control is a corner stone of the Durban Cleaner Air Campaign, and throughout the year all trade licence applications, building

COMPARISON OF SMOG, HAZE AND INVERSION DATA : DURBAN

Example:

In July 1970 smog conditions existed for 18% of the time compared with 29% during July 1969.



plans, applications for permission to conduct offensive trades and applications to purchase Corporation land for industry were reviewed to ensure that adequate provision was made for the control of air pollution from smoke, ash, grit, dust, fumes and odours.

As part of the National Survey for air pollution, Durban operated three air pollution monitoring stations continuously at the City Hall, Congella and Wentworth Fire Stations. These stations measured smoke in the atmosphere in terms of the Soiling Index which is the darkening potential of smoke and soot suspended in one cubic metre of air. Results obtained at these three stations since 1955, that is before air pollution control commenced, showed significant reductions in smoke emission despite the increased industrial, harbour and transport activities. With regard to the results obtained during summer, percentage reductions at the three sites ranged from 21% to 63% and during winter seasons, the reduction over the years amounted to 32% to 66%.

Adhesive tapes and mini-collectors have been used to investigate dust complaints and complementary microscopic and analytical techniques have been developed. These investigations have enabled strong representations to be made to firms concerned regarding the need for more effective control of dust, grit and fly-ash.

(e) Progress with 15 Year Sewerage Reticulation Programme:

(i) Trunk and Main Sewers

Because of difficulties in obtaining a servitude through the Stainbank Nature Reserve it was possible only to continue piece-meal construction of the Umhlatuzana Trunk Sewer and the section between Canna Avenue and the Chatsworth Boundary was constructed.

Towards the end of the year tenders were invited for the construction of the Woodlands Tunnel between Nottingham Road and Yellowwood Park. Construction will occupy almost two years from mid 1971.

Further work on the Umbilo/Mayville Trunk Sewer has been carried out including the construction of a reinforced concrete sleeve-culvert beneath railway tracks adjacent to Edwin Swales Subway. Work on the Umhlatuzana River crossing was commenced but completion was delayed owing to the shortage of steel for pipes.

The Durban North Trunk Sewer was completed between Chettiar Road and Prospect Hall Road and provision made for its extension to Japanese Gardens, commencing early in 1971.

Reservoir Hills and Palmiet Trunk sewers were both completed and will be brought into operation as soon as Kennedy Road Pumping Station can be commissioned.

Work has been commenced on the extension of the Upper Umbilo Trunk Sewer to serve the Hillary North housing scheme and arrangements are in hand for this to be laid to the City Boundary in connection with the Queensburgh and Westville sewerage schemes.

Because of the activities of the Department of Community Development in the areas of Randgebied and Brickfield-Hoosen it has been necessary to accelerate the planning of the Mayville leg of the Umbilo-Mayville Trunk Sewer with a view to its completion as far as Jan Smuts Highway early in 1972.

Detail planning of trunk sewers to serve the Inanda Road and Peter Road areas reached an advanced stage as did that of the Umhlangane Trunk Sewer between Hendon Road and Effingham Road.

(ii) Reticulation

Considerable progress has been made with the construction of further sewerage reticulation and contracts covering the following areas were completed during the year: Blairmont Avenue Stage I, Parkhill Stage I, Bluff Stage II and Athlone Stage I.

Contracts commenced during the year comprised the completion of inter-connecting links, omitted previously because of servitude difficulties, in Bellair/Sea View. Others commenced included Burnwood Road, Rosary Road/Park Station Road, Parkhill Stage II, Mount Vernon, Stella Road/Waverley Road, Bridgevale Area, Blairmont Avenue Stage II and Myhill Road areas.

Towards the end of the year tenders were invited for the Broadway, Puntan's Hill and Brickfield Road areas. A further contract for inter-connecting links in the Reservoir Hills area was awarded and on completion will make over 200 properties in this area available for connection.

(iii) Pump Stations

Work on Kennedy Road Pumping Station reached an advanced stage and this will be commissioned towards mid 1971. Badulla Drive Pumping Station was also carried towards completion for use early in 1971.

Tenders were awarded for the supply and installation of pumps to serve Chatsworth N.U.10 until such time as the Umhlatusana Trunk Sewer can be laid.

(f) Sewerage Treatment Works:

The scheme for secondary treatment at the Southern Works has been planned for the ultimate production of 225 000 cubic metres of purified effluent for industrial use. Construction of the first stage of development to produce 13 600 cubic metres of purified effluent for Mondi Paper Mill commenced during the year.

The Northern Sewage Treatment Works was commissioned during 1970. The first stage of development is designed to treat 50 000 cubic metres per day. These works provide complete treatment - the sludge is produced as a dry, sterile cake after heat treatment and the effluent is discharged into the Umgeni River to General Standard quality.

The two ocean outfalls (150 000 cubic metres per day capacity at Central Sewage Treatment Works and 250 000 cubic metres per day capacity at Southern Works) continue to discharge under security of a monitoring committee. The present rates of outflow are 105 000 cubic metres per day and 70 000 cubic metres per day respectively. Additional bacteriological monitoring was instituted during the year, especially on the Bluff.

(g) Trade Effluent Control:

The Trade Effluent Section has continued monitoring industrial effluents to ensure that there are no serious discharges to sewer or stormwater.

In addition close liaison with industrialists has resulted in their greater awareness of the pollution problems of a large city, and secured their co-operation for better housekeeping on industrial premises.

There has been an extensive review and modification of the relevant Trade Effluent By-Laws under the new heading of Sewerage By-Laws. This has given rise to an enlargement of the scope of the regulations generally, and a major change in the basis of charge for the acceptance of trade effluent. The intention of the alterations is to provide more effective control of industrial discharges.

There has been a marked improvement in the tidal reaches of the Umgeni River due to the diverting of industrial effluent from the river to the Northern Sewage Works. Similar improvements are expected in the near future regarding industrial discharges into the Bay and the Surf zone in the vicinity of the Umlaas Canal.

XIII. GENERALCONFERENCES

Representatives of the City Health Department attended a number of conferences, seminars, annual meetings of organisations and the like in an official capacity, and several senior officers attended regular monthly committee meetings, in most cases in their own time, of welfare organisations in Durban which perform services of significance in the wide concept of public health. The conferences attended away from Durban last year are referred to briefly below.

The City Medical Officer of Health sat in on the seminar "Science and the Press" in Pietermaritzburg in October, and accompanied by the Chief Health Inspector, attended the 1970 Biennial Congress of the Institute of Public Health at Margate from 2nd to 6th November.

Dr. N.L. Becker, Assistant Medical Officer of Health responsible for the "epidemiology" sections of the Department, was its representative at the conference on tuberculosis held in Pretoria in April, and he also addressed the S.A. National Tuberculosis Association in Pietermaritzburg on 24th September.

The Assistant Medical Officer of Health concerned with preventive and promotive health matters, Dr. M.B. Richter, was present at the annual conference of the National Council for Maternal and Family Welfare held in Johannesburg over three days in July and she, in company with the Chief Health Visitor, was present at East London for the annual meeting of the S.A. National Council for Child Welfare in September 1970.

The Chief Health Visitor was present at the latter Council's Health, Nursing and Mothercraft Technical Committee meeting held in Johannesburg in March.

The Department's representative, Senior Health Inspector (Food Hygiene), on the S.A. Bureau of Standard's Committee on pre-packed meat products, visited Pretoria on 15th October 1970 to participate

in the final drafting of the proposed specification of microbiological requirements.

An event held in Durban in which the Department played a not insignificant role was the 1970 Convention of the S.A. Pest Control Association in August when it was officially opened by the Minister of Agriculture, and the keynote address was delivered by His Worship the Mayor. The City Health Department presented three papers at the symposium and several films were projected on appropriate public health subjects. Most of the symposium was devoted to the theme "Domestic Pest Control in Durban" and the Assistant Medical Officer of Health (Dr. Richter), the Personal Assistant and the Senior Health Inspector (Field Hygiene) spoke on "Medical Aspects", "Certain Administrative and Legal Aspects" and "Practical Aspects" respectively.

NATIONAL DIPLOMA EXAMINATIONS

There was no "final year" course at the Natal College for Advanced Technical Education for the Health Inspectors' Diploma in 1970, but European and Indian Health Inspectors wrote the examination for the National Diploma in Tropical Hygiene for Health Inspectors and departmental successes were six and one respectively.

AWARDS TO STUDENT NURSES

The following nurses from general hospitals in Durban were selected for the bestowal of the City Council's awards for outstanding students in training in this city:

Addington Hospital

Beryl Myra Bell	Gold Medal
Susan Felicity Bean	Silver Medal

St. Augustine's (private) Hospital

Maree de Kok	Rolled gold fob watch
Marianna Gotz	Stainless-steel fob watch

Entabeni (private) Hospital

Valerie May Oliver (Mrs.)	Rolled gold fob watch
Elizabeth Jane Stirton	Stainless-steel fob watch

King Edward VIII Hospital (Non-White)

Kelibone Orpah Mohlabi	Rolled gold fob watch
Thilkadharie Rajaram	Stainless-steel fob watch

St. Aidan's Hospital (private Indian)

Skakuntala Singh	Rolled gold fob watch
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METRICATION

In accordance with the request directed to local authorities to implement metrication in accordance with the standards adopted for South Africa, the necessary steps were taken to convert imperial standards contained in the local legislation administered by this department. The various public health by-laws have now been suitably amended in this regard.

MEDICAL BUREAU

Prospective European, Coloured and Indian entrants to the Durban Municipal Service are medically examined for suitability for service in the respective vacancies and Senior Medical Officers comprise medical boards for dealing with employees considered to be medically unfit to continue employment.

The bureau provides a medical consultative service for certain, Fire, Police, Beach and Licensing personnel recruited prior to 1st August 1965, and its activities during the year are summarised as follows:

Service	European		Non-European	Total
	Males	Females		
Pre-employment examinations	1 606 (1 278)	458 (419)	652 (574)	2 716 (2 271)
Consultations	686 (815)	-	-	686 (815)
Medical Boards	12 (16)	1 (2)	15 (15)	28 (31)

XIV. STAFF AND FINANCIAL SUMMARYAMENDMENTS TO STAFF ESTABLISHMENT

The following amendments to the staff establishment were authorised by the City Council and, where applicable, the approval of the Secretary for Health for part-refunds in terms of the Public Health Act was obtained.

Section	Group	Designation of Post	No. of Posts	Remarks
(a) <u>Additions to Establishment</u>				
Admini- stration	European	Records Clerk	1	Re-organisation of Correspondence Section
Family Health and Immunisa- tion	European	Clinic Sister	1	Replaced 1 post of Health Visitor
	Bantu	Senior Health Visitor	1	Replaced 1 post of Clinic Sister (European)
	Indian	Senior Health Visitor	1	from 14.12.1970
	Indian	Health Visitor	4	from 14.12.1970
	Indian	Nurse	2	from 14.12.1970
	Indian	Nurse Aide	4	from 14.12.1970
	Indian	Interpreter/ Cleaner	2	from 14.12.1970
	Indian	Part-time Medical Officer	1	from 8. 9.1970
(b) <u>Posts deleted from Establishment</u>				
Family Health and Immunisa- tion	European	Health Visitor	1	from 1. 1.1970
	European	Clinic Sister	1	from 4. 5.1970
	European	Part-time Medical Officer	1	from 8. 9.1970

The problem of filling staff vacancies, particularly for professional and technical posts which has been constant over the past few years, has not eased at all.

Due to the lack of suitable applicants, it was not possible to fill six vacant positions of Health Inspector and four of Health Visitor.

Re-grading and Re-designation of Posts

Consequent upon reports submitted by the Department, the City Council approved the following -

- (i) the re-grade of a post of Senior Clerk (Grade II) to Senior Clerk (Grade I);
- (ii) the re-grade of a post of Watchman (Bantu) to Interpreter/Cleaner;
- (iii) the re-grade of a post of Clerk (Grade III) (Asiatic) to Operator (Press Room duties).

SALARY GRADES

- (i) The City Council authorised revised salary grades/wages for all European and Non-European employees in the Municipal Service with effect from 1st August, 1970, with the exception of the posts of Senior Clinical Medical Officers, Clinical Medical Officers and the Veterinary Medical Officer in this Department which had been upgraded as from 1st November, 1969.
- (ii) The holiday bonus for European employees was improved from $8\frac{1}{3}\%$ to 10% of the total pensionable emoluments with a maximum of R260 per annum and R130 per annum for married and single personnel respectively.
- (iii) The holiday bonus for Non-Europeans in the Municipal Service was increased from R20 per annum to R35 per annum in respect of employees in receipt of a basic salary of R103 per month or more and R25 for all other employees.
- (iv) The duty hours for employees working a 41 and a 42 hour week were reduced by one hour per week.

STAFF ESTABLISHMENT

The authorised establishment as at 31st December, 1970, was 228 European and 370 Non-European staff members subdivided as follows -

<u>ADMINISTRATIVE SECTION</u>		<u>No.</u>	<u>TUBERCULOSIS CLINICS AND FIELD CONTROL</u>	<u>No.</u>
White			White	
City Medical Officer of Health, Dr. C.R. Mackenzie, M.B.; B.Ch.; D.P.H.; D.T.M. & H. (Rand); F.R.S.H.	1	Senior Clinical Medical Officer, Dr. E.A. Mac-Ildowie, L.M.S.	3	
Deputy City Medical Officer of Health, Dr. G.L. Hilton-Barber, M.B.; Ch.B.; D.P.H.	1	Dr. P.R. Henson, M.R.C.S.; L.R.C.P.; D.P.H.		
Assistant Medical Officer of Health, Dr. N.L. Becker, M.B.; Ch.B.; D.P.H.	1	Dr. R.H. Brown, M.B.; Ch.B.; D.P.H.; D.I.H.		
Assistant Medical Officer of Health, Dr. M.B. Richter, M.B.; B.Ch.; D.P.H.	1	Clinical Medical Officer, Dr. R.W.W. Bowes, M.R.C.S.; L.R.C.P.; M.A. (Cantab.).	4	
Personal Assistant, Poplett, D.J., M.R.S.H.	1	Dr. A.D. Nisbett, M.B.; B.Ch. (Rand).		
Principal Assistant, Donkin, F.D.	1	Dr. T.F. Kethro, M.B.; Ch.B.; D.I.H.; D.P.H.		
Senior Assistant (Technical), Kibble, G.A., Cert. R.S.H.	1	Dr. W. Viljoen, M.B.; B.Ch.		
Senior Assistant (Financial), Dyer, R.B., Cert. R.S.H.	1	Senior Assistant (Administration) Blignault, L.V.; R.S.H.	1	
Chief Clerk (Grade I, 2 Grade II, 2)	4	Health Inspector	1	
Senior Clerk (Grade I, 1 Grade II, 3)	4	Chief Clerk (Grade II)	1	
Records Clerk (Woman) Clerk	11	X-Ray Technician	2	
Principal Woman Assistant	2	Radiographer	2	
Senior Woman Assistant	3	Operator X-Ray	1	
Woman Assistant	7	Health Visitor	5	
Chief Typist	1	Clinic Sister	4	
Senior Typist	1	Woman Clerk	1	
Typist	4	Woman Assistant	2	
General Assistant	1	Clinic Assistant	3	
		Typist	1	
Non-White		Non-White		
Health Assistant (B)	1	Nurse (I. 1, B. 1)	2	
Operator (I)	1	Health Assistant (I. 12, B. 21)	33	
General Assistant (I)	1	Nurse Aide (I. 4, C. 1, B. 7)	12	
Assistant (I)	7	Interpreter/Cleaner (I. 1, B. 4)	5	
Watchman (B.2) Labourer (B.1)	3	Labourer (B)	6	
Total	60	Total	89	
<u>Staff Summary</u>		<u>Staff Summary</u>		
European	47	European	31	
Indian	9	Indian	18	
Bantu	4	Coloured	1	
		Bantu	39	

<u>HEALTH INSPECTION</u>	<u>No.</u>	<u>VETERINARY HYGIENE</u>	<u>No.</u>
White		White	
Chief Health Inspector, Ashdown, N.D.*	1	Veterinary Medical Officer, Dr. W.B. Hobbs, B. V.Sc.	1
Deputy Chief Health Inspector, Crickmore, C.R.A.	1	Laboratory Assistant	2
Senior Health Inspector Clark, A.G.	11	Assistant (I)	<u>1</u>
Green, C.E.O.*		Total	4
Harris, J.K.		<u>FAMILY HEALTH</u>	
Hogan, J.P.*		<u>AND IMMUNISATION</u>	
Ingram, W.A.		White	
Knowles, D.H.*		Senior Clinical Medical Officer, Dr. H.A.B.	1
Phillips, L.G.F.*		Pletts, M.B.; B.Ch.	
Roberts, A.J.L.*		Clinical Medical Officer,	1
Roberts, K.W.C.**		Dr. H.E. Rose, M.B.;	
Spencer, D.W.**		Ch.B.	
Sutherland, F.T.*			
Health Inspector	39	Chief Health Visitor	1
Health Assistant	16	Rankin, M.H.E. x	
Pest Control:		Deputy Chief Health Visitor, Harding E. x	1
Supervisor	1	Senior Health Visitor,	1
Senior General Assistant	1	Stead, R.J. x	
General Assistant	8		
Rodent Control:		Health Visitor	21
General Assistant	7	Clinic Sister	5
		General Assistant	1
Non-White		Clinic Assistant	9
Health Inspector(I.7,B.2)	9	Non-White	
Overseer (I. 1, B. 1)	2	Senior Health Visitor	4
Health Assistant(I.4,B.3)	7	(I.2, B.2)	
Assistant (I)	7	Health Visitor	37
Spotter (I.3,B.10)	13	(C.4, I.15, B.18)	
Labourer (I.12, B.84)	96	Nurse (I.10, B.4)	14
		Overseer (I)	1
Total	219	Health Assistant(I.5,B.4)	9
		Nurse Aide(C.5,I.27,B.16)	48
		General Assistant (I)	1
		Interpreter/Cleaner	18
		(I.10, B.8)	
		Total	173

Note: All Health Inspectors hold a certificate recognised in terms of the Public Health Act and such additional qualifications as indicated.

* Meat & Other Foods
Certificate
** Tropical Hygiene
Certificate

x Medical and Surgical,
Midwifery, Mothercraft,
Health Visitor's and School
Nurse's Certificates

<u>Staff Summary</u>	
European	85
Indian	34
Bantu	100

<u>Staff Summary</u>	
European	41
Coloured	9
Indian	71
Bantu	52

<u>INFECTIOUS DISEASES</u>		<u>No.</u>	<u>VENEREAL DISEASE CLINIC</u>		<u>No.</u>
White			White		
Senior Health Inspector	1		Senior Clinical Medical Officer, Dr. S. Ward, M.R.C.S.; L.R.C.P.	1	
McIver, E.I., R.S.H., Meat & Other Foods					
Health Visitor	1		Clinical Medical Officer, Dr. H.B. Savage, M.R.C.S.; L.R.C.P.	1	
General Assistant	1				
Non-White			Clinical Medical Officer, Dr. W.L. McClure, M.B.; B.Ch. (Rand)	1	
Labourer (I)	1				
Total		4	Non-White		
<u>HEALTH EDUCATION</u>			Nurse (B)	4	
White			Health Assistant (B)	9	
Senior Health Inspector, Hazle, A.D., R.S.H.; Meat and Other Foods, Tropical Hygiene	1		Interpreter/Cleaner (B)	1	
Technician	1		Total		17
Health Visitor	1		<u>Staff Summary</u>		
General Assistant	2		European	3	
Non-White			Bantu	14	
Lecturer(C.1,I.1,B.2)	4		<u>MEDICAL BUREAU</u>		
Assistant Lecturer(B)	1		White		
Junior Lecturer(I.6,B.5)	11		Senior Clinical Medical Officer, Dr. M. Casson, M.R.C.S.; L.R.C.P.	1	
Total		21			
<u>Staff Summary</u>			<u>GROUP SUMMARY</u>		
European	5		European	228	
Coloured	1		Coloured	11	
Indian	7		Indian	142	
Bantu	8		Bantu	217	
			Total		598

POST SUMMARY

<u>White</u>	<u>No.</u>	<u>Non-White</u>	<u>No.</u>
Medical Officer	17	Health Inspector	9
Veterinary Medical Officer	1	Lecturer	16
Clerical	48	Health Visitor	41
Technician	1	Overseer	3
X-Ray Technician	2	Health Assistant	59
Radiographer	2	Nurse	20
Operator X-Ray	1	Spotter	13
Health Inspector	55	Nurse Aide	60
Health Visitor	31	Operator	1
Clinic Sister	9	General Assistant	2
Clinic Assistant	12	Interpreter/	
Supervisor	1	Cleaner	24
General Assistant	21	Assistant	15
Laboratory Assistant	2	Watchman	2
Health Assistant	16	Labourer	104
Part-time appointment	9*	Part-time appointment	1*
	<u>228</u>		<u>370</u>

*MEDICAL PERSONNEL (PART-TIME)TUBERCULOSIS CLINIC

Consultant Radiologist	1	Dr. E.H. Fine, M.B.; B.Ch.(Rand); D.M.R.D.; R.C.P.
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*FAMILY HEALTH (CHILD HEALTH) AND IMMUNISATION

Consultant Obstetrician and Gynaecologist	1	Dr. S.T. Trezise, M.B.; Ch.B.; M.R.C.O.G.
Clinical Medical Officer	8	Dr. P.T.A. Bell, M.B.; B.S.; L.R.C.P. Dr. L.E.J. Chapman, B.Sc., M.B.; B.Ch.; D.P.H. Dr. J.L.B. Hicks, M.B.; B.S. Dr. H. Kennedy, M.B.; Ch.B. Dr. P. Kirtle, M.B.; B.S. Dr. E.K. McDonald, M.B.; Ch.B. Dr. M. Ness, M.B.; Ch.B. Dr. H.B. Khan, M.B.; Ch.B.(I)

In addition, the services of Part-time Medical Officers, appointed to a panel, are employed on a sessional basis for Immunising services.

Consultant Pathologists to the Department	Natal Clinical Laboratories
Consultant Chemical Analysts to the Department	The Corner House Laboratories (1968) (Pty) Limited

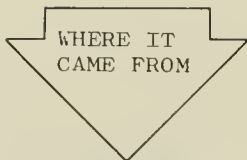
FINANCIAL SUMMARY

An abbreviated statement of the cost, excluding capital expenditure, of the services undertaken by the City Health Department for the financial year ended 31st July, 1970, with comparative figures for the preceding year, is set out below:

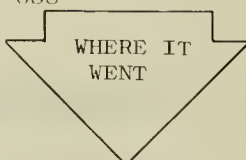
	<u>1969/70</u>	<u>1968/69</u>
	R	R
<u>Expenditure</u>		
Salaries, wages and allowances	1 110 508	952 577
Medical requisites	43 258	26 377
Tuberculosis hospitalisation -		
Government Hospitals: Nett Cost	53 780	43 767
Other Hospitals: Gross Cost	188 603	209 514
Hospitalisation of infectious diseases including venereal diseases	26 215	35 149
Transport and subsidised locomotion	68 310	67 449
Miscellaneous, including electricity, insurance, rents, rates, telephones, stationery, maintenance and loan charges	255 014	252 310
	<u>1 745 688</u>	<u>1 587 143</u>

<u>Income</u>	<u>1969/70</u>	<u>1968/69</u>
	R	R
General, including hospital fees recovered	67 760	49 109
Government part-refunds: Public Health Act	637 608	558 424
Health Services debited to Bantu Hostels and Locations	144 069	134 896
	<u>849 437</u>	<u>742 429</u>
Nett Cost:	<u>896 251</u>	<u>844 714</u>

GROSS 1969/1970 EXPENDITURE : R1 745 688
FOR EACH



R



BOROUGH FUND REVENUE ACCOUNT	57c
GOVERNMENT PART REFUND ON SALARIES, HOSPITAL FEES, CLINICS AND HOSPITAL FEES RECOVERED	32c
BANTU REVENUE CONTRIBUTION	8c
FEES AND GENERAL INCOME	3c

SALARIES, WAGES, ALLOWANCES AND ALLIED STAFF EXPENDITURE	64c
HOSPITAL AND AMBULANCE FEES, DRUGS AND LABORATORY SERVICES	16c
MISCELLANEOUS, INCLUDING ELEC- TRICITY, WATER, TELEPHONE, RENTS, RATES, INSURANCE ETC.	9c
REPAIRS, MAINTENANCE AND RENEWALS	7c
LOAN CHARGES ON CAPITAL	4c



TUBERCULOSIS CONTROL AND CLINICS	28c
HEALTH INSPECTION INCLUDING FIELD HYGIENE	26c
CHILD HEALTH AND FAMILY PLANNING	19c
ADMINISTRATION	17c
INFECTIOUS DISEASES AND IMMUNISATION	6c
VENEREAL DISEASES	2c
HEALTH EDUCATION	2c

NET COST PER CAPITA : R1,23 PER ANNUM
POPULATION : 725 577

(Classified according to International Intermediate List of 150 Causes from Seventh Revision, World Health Organisation, 1948)

Ref.	Cause of Death	Detailed List Numbers	EUROPEAN			COLOURED			BANTU			ASIATIC			TOTALS		
			M	F	Tot.	M	F	Tot.	M	F	Tot.	M	F	Tot.	M	F	Tot.
A 1	Tuberculosis of Respiratory System	001-008	5	2	7	6	1	7	38	18	56	11	6	17	60	27	87
A 2	Tuberculosis of Meninges and Central Nervous System	010		1	1					1	1				1	2	3
A 3	Tuberculosis of Intestines, Peritoneum and Mesenteric Glands	011															
A 4	Tuberculosis of Bones and Joints	012,013										1	1	2		1	2
A 5	Tuberculosis, All Other Forms	014-019	1	1					2	2	4		1	1	3	3	6
A 6	Congenital Syphilis	020															8
A 12	Typhoid Fever	040							2	1	3				2	1	3
A 13	Paratyphoid Fever and other Salmonella Infections	041,042															8
A 16	Dysentery, All Forms	045-048				1	1	2	5	1	6	1	1	2	7	3	3
A 20	Septicaemia and Pyaemia	053	3	4	7	1		1	3	1	4	1	6	7	8	11	19
A 21	Diphtheria	055								1	1	1		1	1	1	2
A 22	Whooping Cough	056							1		1				1		7
A 23	Meningococcal Infections	057	1	1	2						1				1		5
A 26	Tetanus	061							3	5	8	3	1	4	2	2	4
A 28	Acute Poliomyelitis	080													6	6	12
A 29	Acute Infectious Encephalitis	082	1	1	2	1		1				1	1	2	3	2	5
A 32	Measles	085				1	1	2	21	15	36	4	2	6	26	18	44
A 34	Infectious Hepatitis	092							2	3	5	1	2	3	3	5	8
A 43	All Other Diseases Classified as Infective and Parasitic	036-039,049,054,059,063-074,086-090,093,095,096,120-122,131-138															9
A 44	Malignant Neoplasm of Buccal Cavity and Pharynx	140-148	8		8				2		2				2		2
A 45	Malignant Neoplasm of Oesophagus	150	5	1	6	2	2	4	23	5	28	1	1	2	11	2	13
A 46	Malignant Neoplasm of Stomach	151	9	9	18				5	3	8	7	5	12	31	15	46
A 47	Malignant Neoplasm of Intestine except Rectum	152,153	10	4	14	1	1	2	1	3	4	4	4	8	16	12	28
A 48	Malignant Neoplasm of Rectum	154	3	4	7	1		1		1	1	1		1	5	5	10
A 49	Malignant Neoplasm of Larynx	161	6		6				3		3	1	1	2	10	1	11
A 50	Malignant Neoplasm of Trachea, Bronchus and Lung, not specified as Secondary	162,163,166	45	22	67	6	1	7	18	1	19	6	2	8	75	26	101
																	105

Ref.	Cause of Death	Detailed List Numbers	EUROPEAN			COLOURED			BANTU			ASIATIC			TOTALS				
			M	F	Tot.	M	F	Tot.	M	F	Tot.	M	F	Tot.	M	F	Tot.		
A 51	Malignant Neoplasm of Breast	170		18	18				1	1	2		5	5		1	24	25	27
A 52	Malignant Neoplasm of Cervix Uteri	171		8	8		3	3	2	15	15		9	9			35	35	29
A 53	Malignant Neoplasm of Other and Unspecified Parts of Uterus	172-174																	
A 54	Malignant Neoplasm of Prostate	177	4		2				1	1	1		2	2			5	5	16
A 55	Malignant Neoplasm of Skin	190,191	5	1	4			1	1	2	2		1	1		8	8	9	
A 56	Malignant Neoplasm of Bone and Connective Tissue	196,197	2	2	4														
A 57	Malignant Neoplasm of All Other and Unspecified Sites	155-160,164,165,175,176,178-181,192-195,198,199																	
A 58	Leukaemia and Aleukaemia	204	58	38	96		3	6	6	23	5	28	10	10	20	94	56	150	127
A 59	Lymphosarcoma and Other Neoplasms of Lymphatic and Haemotopoietic System	200-203,205	6	5	11		1	1		3	1	4	4	3	7	14	9	23	17
A 60	Benign Neoplasms and Neoplasms of Unspecified Nature	210-239	12	6	18		1	2	1	1	1	1	1		1	15	7	22	17
A 63	Diabetes Mellitus	260																	
A 64	Avitaminosis and Other Deficiency States	279-286																	
A 65	Anaemias	290-293	4	1	5					2	5	7	1		1	5	1	6	12
A 66	Allergic Disorders; All Other Endocrine, Metabolic and Blood Diseases	240-245,253,254,270-277,287-289,294-299	1	6	7		1	1	3	2	2	3	7	14	21	11	25	36	59
A 67	Psychoses	300-309								16	17	33	53	4		16	17	33	54
A 68	Psychoneuroses and disorders of Personality	310-324,326	10	7	17														
A 69	Mental Deficiency	325																	
A 70	Vascular Lesions Affecting Central Nervous System	330-334	2		2					1	2	3		1	1	3	3	6	1
A 71	Non-meningococcal Meningitis	340								1	1	1				1	1	1	
A 73	Epilepsy	353																	
A 74	Inflammatory Diseases of Eye	370-379																	
A 78	All Other Diseases of the Nervous System and Sense Organs	341-344,350-352,354-369,380-384,386,388-390,394,398																	
A 79	Rheumatic Fever	400-402	5	7	12		3	4		10	6	16	4	8	11	21	22	43	16
A 80	Chronic Rheumatic Heart Disease	410-416	2	1	3											2	2	4	9
																5	6	11	14

Ref.	Cause of Death	Detailed List Numbers	EUROPEAN				COLOURED				BANTU				ASIATIC				TOTALS			
			M	F	Tot.	1969	M	F	Tot.	1969	M	F	Tot.	1969	M	F	Tot.	1969	M	F	Tot.	1969
A 81	Arteriosclerotic and Degenerative Heart Disease	420-422	293	184	477	454	8	10	18	10	8	5	13	7	170	75	245	238	479	274	753	709
A 82	Other Diseases of Heart	430-434	114	87	201	159	4	7	11	14	40	36	76	92	109	74	183	123	267	204	471	388
A 83	Hypertension with Heart Disease	440-443	11	9	20	20		2	2	6	19	6	25	21	13	8	21	58	43	25	68	105
A 84	Hypertension without mention of Heart	444-447	4		4	4					2	5	7	11	9	3	12	11	15	8	23	26
A 85	Diseases of Arteries	450-456	23	10	33	43				1	2	2	4	6	2	1	3	7	27	13	40	57
A 86	Other Diseases of Circulatory System	460-468	14	16	30	26		1	1	1	9	4	13	12	7	5	12	9	30	26	56	48
A 88	Influenza	480-483	1	4	5	2		1	1			1	1	2	9	5	14	2	10	11	21	6
A 89	Lobar Pneumonia	490	9	12	21	36	4	1	5	10	26	20	46	34	14	6	20	18	53	39	92	98
A 90	Bronchopneumonia	491	82	64	146	108	9	12	21	26	78	64	142	154	99	99	198	252	268	239	507	540
A 91	Primary Atypical, Other, and Unspecified Pneumonia	492,493	11	9	20	10				1	3	4	7	4	9	8	17	16	23	21	44	31
A 92	Acute Bronchitis	500		1	1	2					1		1	3	2	2	4	10	3	3	6	15
A 93	Bronchitis, Chronic and Unqualified	501,502	11		11	20		1	1	1	1		1	2	5	3	8	13	17	4	21	36
A 95	Empyema and Abscess of Lung	518,521	1		1	2		1	1	1	3	2	5	5	2		2	4	6	3	9	12
A 96	Pleurisy	519										1	1							1	1	
A 97	All Other Respiratory Diseases	503,511-517, 520,522-528	28	11	39	54	3	1	4	7	74	46	120	119	8	2	10	26	113	60	173	206
A 99	Ulcer of Stomach	540	5	4	9	8		1	1		1		1	3	3		3	3	9	5	14	14
A 100	Ulcer of Duodenum	541	1		1	3					1		1								2	3
A 101	Gastritis and Duodenitis	543													1	2	3		1	2	3	
A 103	Intestinal Obstruction and Hernia	560,561,570	1	3	4	8	2	1	3		4	3	7	1	2	3	5		9	10	19	9
A 104	Gastro-enteritis and Colitis, except Diarrhoea of the Newborn	571,572	3	1	4	5	2	3	5	8	49	50	99	137	48	33	81	107	102	87	189	257
A 105	Cirrhosis of Liver	581	8	4	12	19	2		2	2	4	4	8	19	12	2	14	28	26	10	36	68
A 106	Cholelithiasis and Cholecystitis	584-585		1	1												1	1		1	1	1
A 107	Other Diseases of Digestive System	536-539,542, 544,545,573-580,582,583, 586,587																				
A 108	Acute Nephritis	590	21	18	39	30	4	2	6	6	108	127	235	198	26	13	39	26	159	160	319	260
						1		1	1	1	1				1	1	1	1	1	1	2	3

Ref.	Cause of Death	Detailed List Numbers	EUROPEAN			COLOURED			BANTU			ASIATIC			TOTALS					
			M	F	Tot.	1969	M	F	Tot.	1969	M	F	Tot.	1969	M	F	Tot.	1969		
A 109	Chronic, Other and Unspecified Nephritis	591-594	11	10	21	13	1	1	3	8	6	14	8	14	12	26	34	28	62	46
A 110	Infections of Kidney	600		5	5	4		2	2	5	2	7	7	3	4	7	8	13	21	18
A 114	Other Diseases of Genito-Urinary System	601,603,605-609,611-617,622-637		1	1	1							2	1		1	1	1	2	3
A 115	Sepsis of Pregnancy, Childbirth and the Puerperium	640,641,681,682,684											1							2
A 116	Toxaemias of Pregnancy and the Puerperium	642,652,685,686																		
A 117	Haemorrhage of Pregnancy and Childbirth	643,644,670-672																		
A 118	Abortion without mention of Sepsis or Toxæmia																			
A 119	Abortion with Sepsis	650																		
A 120	Other complications of Pregnancy, Childbirth, and the Puerperium	651		1	1	1		1					1							
		645-649,660,673-680,683,687-689											5	5	5	5	2	2	11	3
A 121	Infections of Skin and Subcutaneous Tissue	690-698																		
A 122	Arthritis and Spondylitis	720-725		1	1	1											1	1	1	1
A 126	All Other Diseases of Skin and Musculoskeletal System	700-716,731-736,738-744	1		1	5	1	1	2				8					2	4	6
A 127	Spina Bifida and Meningocele	751		1	1								1	1	1	1	1	1	2	3
A 128	Congenital Malformations of Circulatory System																			
A 129	All Other Congenital Malformations	754	2		2	3			2	3	4	7	1	2	2	4	7	6	13	13
A 130	Birth Injuries	750,752,753,755-759	1	2	3	4		1	2	2	2	4	8	2	3	5	5	8	13	16
A 131	Post-natal Asphyxia and Atelectasis	760,761	2	1	3	2	1	1	2	9	10	19	20	2	5	7	10	14	16	34
A 132	Infections of the Newborn	762	1		1	1			3	10	10	20	25	6	3	9	9	17	13	38
A 133	Haemolytic Disease of the Newborn	763-768		3	3	3		1	2	23	24	47	32	13	16	29	25	36	44	62
A 134	All Other Defined Diseases of Early Infancy	770					1	1	1				1	1	1	2		2	1	1
		769,771,772								4	4	8	6	2		2	6	6	4	10

Ref.	Cause of Death	Detailed List Numbers	EUROPEAN				COLOURED				BANTU				ASIATIC				TOTALS			
			M		F		Tot.		1969		M		F		Tot.		1969		M		F	
			M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	Tot.	Tot.
A 135	Ill-defined Diseases peculiar to Early Infancy, and Immaturity Unqualified	773-776	16	8	24	27			25	166												
A 136	Senility without mention of Psychosis	794	3	11	14	21		2		1												
A 137	Ill-defined and Unknown Causes of Morbidity and Mortality	780-793, 795, 796																				
AE 138	Motor Vehicle Accidents	E810-E835	95	118	213	137		39		688												
AE 139	Other Transport Accidents	E800-E802, E840-E866	21	7	28	27		1		16												
AE 140	Accidental Poisoning	E870-E896	2		2					3												
AE 141	Accidental Falls	E900-E904	5	2	7	6		2														
AE 142	Accidents Caused by Machinery	E912																				
AE 143	Accidents Caused by Fire and Explosion of Com-bustible Material	E916																				
AE 144	Accidents Caused by Hot Substances, Corrosive Liquid, Steam and Radiation	E917, E918																				
AE 145	Accidents Caused by Firearm	E919		1	1																	
AE 146	Accidental Drowning and Submersion	E929		2	2	6																
AE 147	All Other Accidental Causes	E910, E911, E913-915, E920-E928, E930-E962																				
AE 148	Suicide and Self-Inflicted Injury	E963, E969-E979	7	1	8	23		4		118												
AE 149	Homicide and Injury Purposely Inflicted by Other Person (Not in War)		7	3	10	11		2		8												
		E964, E980-E985				2				31												
		TOTALS	1 102	902	2 004	1 872		287		2 489												
		CRUDE DEATH RATES	10,41		(9,81)			6,74	(8,87)	11,74	(11,87)				6,97	(7,50)			9,13		(9,48)	

CAUSES OF DEATH IN RESPECT OF INFANTS (UNDER 1 YEAR)

(Classified according to International Intermediate List of 150 Causes from Seventh Revision, World Health Organisation, 1948)

Ref.	Cause of Death	Detailed List Numbers	EUROPEAN			COLOURED			BANTU			ASIATIC			TOTALS		
			M	F	Tot.	M	F	Tot.	M	F	Tot.	M	F	Tot.	M	F	Tot.
A 1	Tuberculosis of Respiratory System	001-008								2	2			1		2	4
A 2	Tuberculosis of Meninges and Central Nervous System	010								1	1					1	2
A 5	Tuberculosis, All Other Forms	014-019															1
A 6	Congenital Syphilis	020															4
A 13	Paratyphoid Fever and Other Salmonella Infections																
A 16	Dysentery, All Forms	041,042															2
A 20	Septicaemia and Pyaemia	045-048															2
A 22	Whooping Cough	053															4
A 26	Tetanus	056															1
A 28	Acute Poliomyelitis	061															5
A 29	Acute Infectious Encephalitis	080															1
A 32	Measles	082															4
A 43	All Other Diseases Classified as Infective and Parasitic	085															21
A 57	Malignant Neoplasm of all Other and Unspecified Sites	036-039,049,054,059,063-074,086-090,093,095,096,120-122,131-138															1
A 59	Lymphosarcoma and Other Neoplasms of Lymphatic and Haematopoietic System	155-160,164,165,175,176,178-181,192-195,198,199															
A 64	Avitaminosis and Other Deficiency States	200-203,205															
A 65	Anaemias	279-286															6
A 66	Allergic Disorders; All other Endocrine, Metabolic and Blood Diseases	290-293															2
A 69	Mental Deficiency	240-245,253,254,270-277,287-289,294-299															5
A 70	Vascular Lesions Affecting Central Nervous System	325															1
A 71	Non-meningococcal Meningitis	330-334															8
A 78	All Other Diseases of the Nervous System and Sense Organs	340															25
		341-344,350-352,354-369,380-384,386,388-390,394-398															

Ref.	Cause of Death	Detailed List Numbers	EUROPEAN			COLOURED			BANTU			ASIATIC			TOTALS		
			M	F	Tot.	M	F	Tot.	M	F	Tot.	M	F	Tot.	M	F	Tot.
A 81	Arteriosclerotic and Degenerative Heart Disease	420-422															
A 82	Other Diseases of Heart	430-434	1		1	1		1	1		1			1	2		1
A 84	Hypertension without mention of Heart	444-447					3	4		2	3			5	5		5
A 88	Influenza	480-483										1		1	1		
A 89	Lobar Pneumonia	490					1	1		1				1	1		
A 90	Bronchopneumonia	491					3	3		3		2		6	4		5
A 91	Primary Atypical, Other and Unspecified Pneumonia	492, 493				1	3	4		37	72	27	23	50	61		151
A 92	Acute Bronchitis	500							1	4	5		1	1	5		5
A 93	Bronchitis, Chronic and Unqualified	501, 502											1	1	1		3
A 97	All Other Respiratory Diseases	503, 511-517, 520, 522-528				1		1		15	28	1		1	17	13	36
A 103	Intestinal Obstruction and Hernia	560, 561, 570				1	1	2					1	1	2	3	1
A 104	Gastro-enteritis and Colitis, except Diarrhoea of the Newborn	571, 572								38	74	39	23	62	80	61	187
A 107	Other Diseases of Digestive System	536-539, 542-544, 545, 573-580, 582, 583, 586, 587	2		2	1	2	3			106						
A 110	Infections of kidney	600	1		1	1		1		62	75	2	1	3	66	76	111
A 127	Spina Bifida and Meningocele	751		1	1						1	1		1	1	2	3

Ref.	Cause of Death	Detailed List Numbers	EUROPEAN				COLOURED				BANTU				ASIATIC				TOTALS							
			M	F	Tot.	1969	M	F	Tot.	1969	M	F	Tot.	1969	M	F	Tot.	1969	M	F	Tot.	1969				
A 128	Congenital Malformations of Circulatory System All Other Congenital Malformations Birth Injuries Post-natal Asphyxia and Atelectasis Infections of the Newborn Haemolytic Disease of the Newborn All Other Defined Diseases of Early Infancy III-defined Diseases Peculiar to Early Infancy and Immaturity Unqualified Causes of Morbidity and Mortality All-defined and Unknown Causes of Morbidity and Mortality Motor Vehicle Accidents Accidents Caused by Hot Substances, Corrosive Liquid, Steam and Radiation All Other Accidental Causes	754	2		2	2				2				3	4	7		2	2	4	6	7	6	13	10	
A 129		750,752,753, 755-759	1	2	3	1		1	2	5	1	2	3		1	2	3		1	3	4	2	3	8	11	10
A 130		760,761	2	1	3	2	1		1	2	9	10	19		2	5	7	10	2	5	7	10	14	16	30	34
A 131		762	1		1	1			3		10	10	20		6	3	9	9	6	3	9	9	17	13	30	38
A 132		763-768		3	3	3	3	1	1	2	23	24	47		13	16	29	25	13	16	29	25	36	44	80	62
A 133		770						1	1						1	1	2		1	1	2		2	1	3	1
A 134		769,771,772									4	4	8		2		2	6	2		2	6	6	4	10	12
A 135																										
A 137		773-776	16	8	24	27	13	6	19	24	101	81	182		59	56	115	94	189	151					340	311
AE138		780-793, 795,796	2	1	3	3	5	4	9	7	87	81	168		18	19	37	30	112	105					217	304
AE144		E810-E835													1		1		1				1		1	
AE147		E917, E918 E910, E911, E913- E915, E920-E928, E930-E962	1		1	1	1		1	1	1		1													
TOTALS			35	16	51	50	33	24	57	71	422	415	837		190	162	352	365	680	617			1 297	1 399		
INFANT MORTALITY RATES (DEATHS OF INFANTS UNDER 1 YEAR PER 1 000 LIVE BIRTHS)			13,78 (14,22)				35,08 (44,63)				89,42(103,39)				39,52 (43,54)				54,98 (62,68)							

